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AN

ENQUIRY

INTO

THE NATURE, CAUSES, AND CURE

OF

HYDROTHORAX.

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INTO

THE NATURE, CAUSES, AND CURE

OF

HYDROTHORAX;

ILLUSTRATED BY

INTERESTING CASES,

AND

MANY LIVING EXAMPLES OF THE SUCCESS OF THE MODE OF TREATMENT RECOMMENDED.

BY L. MACLEAN, M. D.

SUDBURY:

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1810.

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MEDICAL
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HIS WORTHY FRIEND,

M. MACQUEEN, Esq. M. D. &c.

OF RIDGEMONT, IN BEDFORDSHIRE,

THE

FOLLOWING PAGES ARE INSCRIBED,

WITH

SENTIMENTS OF SINCERE REGARD

AND ESTEEM,

BY THE

AUTHOR.

SUDBURY,
January 1st, 1810.

" At non solum copia major experimentorum quærenda est et procuranda, atque etiam alterius generis, quam adhuc factum est; sed etiam methodus plane alia, et ordo, et processus, continuandæ et provehendæ experientiæ, introducenda. Vaga enim experientia et se tantum sequens mera palpatio est, et homines potius stupefacit quam informat. At cum experientia lege certa procedet, seriatim et continenter, de scientiis aliquid melius sperari poterit."*

* Bacon, Nov. Org. lib. i. § 100.

PREFACE.

IN the course of Medical experience certain diseases arrest the attention more than others; insomuch that every practitioner has, what he terms, his favourite disease, which he fancies he understands better, and cures more readily than his brethren of the profession: whether this predilection and avowed superiority be well founded or not, the science of medicine has undoubtedly been advanced more by those who have thus directed their labours to the investigation of particular diseases, than by professors and teachers of medicine, or systematic writers, who have taken a more extensive range: of the truth of this the numerous distinct treatises on the

gout, gravel, and stone, on cancer, scrophula, consumption, diabetes, and other maladies, afford abundant examples. The life of man is too limited, and the diseases incident to his frame too multifarious and intricate to admit of material improvement by the latter. But while eminent talents and great industry have been applied to the elucidation of every other painful affection, it is a lamentable fact that this has not been the case with the same success in the disease which forms the subject of the following enquiry: It seems to have been in a great measure overlooked, or so lightly touched upon as if it claimed no more notice than the common disorders of every season; yet, whether we regard the frequency of its occurrence, the formidable aspect it assumes, the extreme sufferings of the patient, or the almost uniformly fatal termination to which it leads, few demand investiga-

tion more than dropsy of the chest. For, if the observations of the judicious and accurate Withering, and of the late Dr. W. Hamilton, be excepted, little is to be found in the writings of the physicians of this island on the disease deserving particular attention. While in the works of the celebrated Morgagni, a body of evidence, highly interesting on the history, diagnostic signs, appearances on dissection, or morbid states connected with it, has been collected, from various authors of acknowledged celebrity, on the continent. On the cure, however, foreign writers, it must be confessed, have not been fortunate.

Impressed with these considerations the Author availed himself of every opportunity of obtaining information on so important a subject. At an early period of his practice, upwards of sixteen years ago, as may be observed by the appendix, No. i. he began to note down in his report book,

the history of every case which occurred, the remedies which were used, together with such remarks as seemed worthy of being preserved; at first, more for his own information, than with any view to publication: In the progress of time, however, these acquired a bulk far exceeding his expectations, which induced him to employ his leisure hours in arranging them into a more regular form; and he has at length ventured to submit the result of his experience to the public in the hope of being useful to mankind, and affording some hints for the cure or alleviation of a disease which has been generally regarded beyond the reach of medicine.

In an appendix he has thrown together upwards of eighty well marked cases, or the materials from which his information has been chiefly drawn; these have not been selected for the purpose, but inserted in the order in which they occurred, every case

having been traced from its origin through its progressive changes, stages and relapses, to its ultimate termination in death or permanent recovery: by this mode of proceeding the list of cures is not so long as it might have been, had he confined himself to first or second editions of these cases: he is confident, however, that the value of his labours will thence be enhanced, if in other respects they should be found to possess any merit, since it is only from a great number of facts thus carefully collected, faithfully and impartially related, that the real nature and cure of obscure and intricate diseases is to be ascertained, that a correct estimate is to be formed of the effects of remedies, or that a decided inference is to be drawn in favour of any particular mode of treatment,—consequently, that experience can prove really beneficial.

The few dissections which his own practice has furnished, owing to the

prejudice still existing in the country against opening dead bodies, he has endeavoured to supply from Morgagni and other authors, which he doubts not will be considered as not the least interesting part of the work.

If the lovers of novelty should look for new remedies, they will be disappointed; but they will find old medicines, or those in common use, applied in different forms and combinations, with different views, and, he presumes to hope, with a degree of success unparallelled in the history of the disease:—they will find that in every instance it may be relieved, that in a considerable number it may be kept in check for months, and years, with long intervals of repose, or comparative ease and comfort to the patient; and that in some it may be perfectly and permanently cured, even under the most unpromising circumstances. This, it is presumed, is more than can be accomplished, in the present state

of our knowledge, from any mode of treatment hitherto adopted.

It is obvious that instances will occur in which the relief must necessarily be of short duration, and in which life can only be held, under a precarious tenure, in a state of feeble and perhaps comfortless existence. If any one should say, and it has been said, that in such circumstances, the advantages are so trifling as scarcely to justify the interferance of art, since it will only perhaps be to protract the miseries of the patient, let him peruse the following interesting quotation from a celebrated foreign writer, which cannot be too much admired, and the truth of which many of the annexed cases strongly illustrate. "Those acquainted with the value of "life," says he, "know the import-"ance of a year, a day, and even an "hour; and these when spent in the "full enjoyment of the vital func-"tions, of how much enjoyment to

" our whole existence! what events
" fertile in consequences depend oft-
" en on one hour of our life! It is
" therefore an eternal and irreparable
" loss when not enjoyed as it ought.
" —On the bed, of death, an hour
" often determines the fate of whole
" families and states.—How many
" sick die in greater peace, because,
" by having lived an hour longer,
" they accomplish one of their most
" ardent wishes.—With what anxiety
" do many dying fathers wish for
" such an hour, because they expect
" the arrival of an absent son. How
" grateful is this hour to surviving
" friends who have received from a
" dying man information respecting
" some important event of his life.
" Is any thing further necessary to
" give importance to the art of pro-
" longing feeble life?" Asthenology, or the art of preserving feeble life, and of supporting the constitution under the influence of incurable dis-

eases, by C. A. STRUVE, M. D. translated from the German by W. Johnson.

In committing these pages to the press the author seriously laments that unavoidable avocations have precluded that precision and accuracy in the arrangement of his materials, as well as in the dress in which they are clothed, which the public have a right to expect. But since the work has already been delayed for some years from these causes, he confidently anticipates the indulgence of the candid and liberal reader, in the hope that the errors and omissions which may have in consequence escaped him, will not meet with that severity of animadversion, which certain critics of the present day seem to delight in, provided it should be found that the attention has not been drawn to the subject in vain.

THE READER IS REQUESTED TO CORRECT THE FOLLOWING ERRATA.

PAGE 7, l. 17, *for* later *lege* latter.
16, l. 16, *for* any *lege* a.
58, l. 24, *for* countenance *lege* face.
62, l. 8, *for* principle *lege* principal.
109, l. 25, *after* does *add* not.
139, l. 19, *for* of *lege* if.
140, l. 3, *for* caver *lege* cava.
144, l. 23, *for* gambage *lege* gamboge.
171, note, *for* Messman *lege* Mossman.
180, l. 18, *for* Venienti *lege* Vincenti.
183, l. 8, *erase the word* in.
186, l. 18, *for* accesent *lege* acescent.
191, l. 26, *for* 14 *lege* 13.
192, l. 19, *after* comparatively *add* with.
206, l. 2, *for* latter *lege* blood.
272, l. 22, *for* its *lege* their.

APPENDIX.

18, l. 3, *for* 79 *lege* 74.
29, l. 25, *for* Zij *lege* Zvſ.
34, l. 17, *for* 3ſs. *lege* 3jſs.
55, l. 9, *for* urgent *lege* urgeat.
95, l. 25, *after January* 17 *add* 1800.
175, l. 23, *after* natural *add* state.

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APPENDIX, No. I.

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from its origin through its various stages, changes, and relapses, to its termination in death or permanent recovery, together with occasional remarks.
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APPENDIX, No. II.

Containing an abstract of several curious and interesting cases from various Authors, together with an account of the appearances on dissection.
Page 187, to 218.

AN

ENQUIRY,

&c.

CHAP. I.

SECT. I.

Definition of Hydrothorax.

THE disease which is made the subject of the following pages is thus defined by nosological writers.

"Difficultas respirandi decubitu horizontali aucta, cum faciei pallore, manuum et pedum œdemate, symptomatis ephialticis, alterutrius brachii stupore, et ægritudine chronica non remittente." *

* Sauv. cl. v. ord. ii. G. xiii. 150.

"Cachexia cum dyspnœa et effusione aquæ intra pectus, strepitum concussione intus facientis." †

"Est genus anhelationis chronicum continuum, stipatum phlegmasia pedum, pallore faciei, œdemate manuum, subita in somno suffocatione, alterutrius manus stupore, sine signis empyematis; hæc symptomata, jam adsunt omnia, jam tantum aliqua; anhelatio crescit pro inclinatione corporis." ‡

"Dyspnœa; faciei pallor; pedum œdemata; urina parca; decubitus difficilis; subita et spontanea ex somno cum palpitatione, excitatio; aqua in pectore fluctuans." §

In a nosological definition of diseases, such a concise, yet sufficiently comprehensive, view of their more prominent features should be exhibited as will enable the medical practitioner, bearing them in mind, readily to recognize every individual disease as it occurs, and to distinguish it from all others. Hence it is obvious, that those symptoms only, which are essential to it, or exist in the generality of

† Vogel viii. cccxi.

‡ Sagar cl. viii. ord. ii. G. xii. 256.

§ Cullen cl. iii. ord. ii. G. lxxviii.

instances, ought to have a place in such definition.

In the definition of Sauvages every symptom specified will be found occasionally to occur; but any person looking for the "alterutrius brachii stupor," &c. of this author, and of Sagar, as necessary to the disease, would frequently be deceived, as this symptom is wanting in by far the greater number of instances: it was found to exist in very few of the cases specified in the appendix.

The "effusio aquæ intra pectus, strepitum concussione intus facientis," of Vogel, or the "aqua in pectore fluctuans" of Cullen, which implies the same, though apparently adopted on the authority of the father of medicine, has, however, been done on vague and erroneous grounds, probably from the analogy of ascites, without considering the difference of conformation of the abdomen and chest, which, in the one, is such as to admit of easy detection, while in the other it utterly precludes it. Though looked for in every instance which occurred in my practice, it has hitherto eluded observation. If the fluctuation of water could as readily be heard in hydrothorax, as it is felt, against the fingers, in ascites, it would be

sufficient of itself to mark the disease. But those who will not admit the presence of a watery fluid in the cavities of the chest without it, will search for it in vain.

The "symptomata ephialtica," or ephialtes* in the definition of Sauvages and Sagar, are peculiarly characteristic of the disease, but as the "subita ex somno," &c. of Cullen, is generally the consequence of these, and may be more familiar to the english reader, it has been prefered in the author's definition.

The livid aspect of the countenance; the irregularity of the pulse; the high colour and sediment of the urine, which have been added, were found, on a review and comparison of the annexed cases, with few exceptions, to occur. Palpitation of the heart was very frequent, yet as it was observed more generally on any sudden bodily exertion, emotion of mind, or on being roused from sleep, it was

* "Anhelatio difficilis, querula, cum insomnio terrifico." Sauv. cl. v. ord. i. G. i. 158.

"Morbus hic recurrens afficit dormientes cum anhelatione et insomnio corporis cujusdam pectus opprimentis; unde respiratio horum querula, gemebunda, et anxia." Sagar cl. viii. ord. i. G. i. 245.

"Respiratio profunda, suffocans, dormientis in dorso cum somnio laborioso." Lin. cl. viii. ord. i. G. 163.

It seems singular that hydrothorax should not have a place in the nosology of Linnæus.

judged more eligible, on due consideration, to follow the example of Dr. Cullen, by joining it with the last symptom, as it for the most part attended it, in a greater or less degree, and since the irregularity and intermission of the pulse would serve to give an idea of the inequality of the heart's action at other times.

Influenced by these considerations, the following definition is submitted in the hope that it will be found liable to fewer objections than any of those of the celebrated writers transcribed.

Dyspnœa, decubitu horizontali, corporisque motu, aucta; faciei pallor vel livor; urina parca, rubra, sedimentum furfuraceo-lateritium, deponente; pulsus inequalis, intermittens; pedum vel manuum œdema; subita e somno, cum palpitatione, excitatio.

When respiration is considerably impeded, especially on motion, in a horizontal posture, or on ascending an acclivity; when the countenance is at the same time pale and sallow, assumes a leaden or livid hue; the urine small in quantity, high colored, and, on cooling, deposits a reddish or pink colored sediment; the pulse irregular or intermitting; the feet, ancles, or hands, swell, and are colder than na-

tural; and the patient is suddenly roused from sleep by a sense of suffocation or extreme anxiety about the præcordia attended with palpitation; the most superficial observer will have no doubt of the presence of a watery fluid in some of the cavities of the chest, and that the person, thus affected, labours under the disease, termed hydrothorax, or dropsy of the chest.

The above combination of symptoms may be said to constitute the leading and prominent features of this formidable disease; and were it always to assume such clearly marked characters, it might readily be distinguished from all others. Experience, however, teaches that the event is often otherwise; that frequently in the incipient and early stages, sometimes in the advanced periods, some of these are either entirely wanting or so obscurely marked as to elude observation; and since it is well known that considerable collections of water have often been found on dissection in the cavities of the chest, when none was suspected to exist before death, it becomes an object of importance to point out such circumstances as may lead to its early detection, when it will be more within the reach of medical treatment. With

this view the most eligible mode appeared to be, first to give a general outline of its precursors or early signs, afterwards to deliver the history of every individual symptom in its different forms, gradations and variations, and finally to take such a view of the whole as might lead to its early discovery: in doing this care has been taken to discriminate between those which are inseparably connected with it, and may be termed pathognomonic, and those which are less constant, or seldom occur.

SECT. II.

Precursors, early signs, and general history, of the disease.

Although many writers have given a circumstantial history of its more advanced and later stages, yet none that has fallen within my reach appears to have taken a comprehensive view of its precursors and early symptoms. The best and most accurate I have met with is in Dr. Cullen's inestimable work, his "first lines," &c. This, as far as it goes, is so faithfully drawn from nature, that I shall transcribe it without abridgement in his own words.

"The disease," says he, "frequently comes

on with a sense of anxiety about the lower part of the sternum. This, before it has subsisted long, comes to be joined with some difficulty in breathing; at first on the person's moving faster than usual, upon his walking up an acclivity, or upon his ascending a staircase: but after some time, this difficulty of breathing becomes more constant and considerable, especially during the night, when the body is in a horizontal situation: commonly, at the same time, lying on one side is more easy than upon the other, or perhaps lying upon the back is more easy than upon either side. These circumstances are usually attended with a frequent cough, that is at first dry; but which, after some time, is accompanied with an expectoration of thin mucus." *

On minutely tracing the history of the cases of those who applied for my advice, to the origin of the disorder, the greater number were found to have laboured for weeks, months, in some instances, even for years, under particular symptoms, generally such as indicated defective energy, or morbid alteration of structure, of some of the organs contained within

* Vol. iv. 310.

the cavity of the chest, especially of the heart and lungs. Of these, the peculiar sense of anxiety mentioned above is perhaps the most common: it is variously described by the patient: when questioned respecting his complaints, he often places his hand on the lower part of the sternum and epigastrium, or region of the heart, as "the seat of all his misery," as he terms it: it is sometimes called a sense of sinking, fainting, or fluttering, "as if his life were going from him:" at other times, however, a sense of oppression, as if an immense weight were placed on this part, is complained of; and not uncommonly by the same person. This symptom is probably not constant at first, but returns at certain intervals and from certain causes, such as those mentioned in the definitions, or sudden emotions or passions. If the pulse be examined it will often be found irregular, intermitting, or oppressed, varying in strength and frequency from the slightest causes, accompanied with occasional palpitation, or corresponding interruption of the action of the heart; but these generally subside on rest, or the abstraction of the causes which produced them. In some instances, however, an inequality of the pulse

is one of its first forerunners; and if this has speedily followed acute or violent inflammation of any of the principal thoracic viscera, especially of the left side, or a severe blow on the region of the heart, the presence of serous effusion in the pericardium, or sacs of the pleura, is in general to be apprehended.

The breathing is readily hurried or quickened on any sudden emotion of mind or bodily exertion; and there is sometimes an irresistible inclination to draw a full, but quick or hurried, inspiration from a sense of oppression or stricture about the præcordia. There is an unusual sensibility to cold, and the lungs are so tender, that coughs or catarrhal affections are readily excited by slight transitions of temperature. The feet are in general unusually cold, with a sense of numbness or imperfect sensibility, especially at night when in bed. The patient is not only readily "out of breath," as he terms it, but much fatigued, by the ordinary exercise of walking or running; and the bodily functions are disordered by little excesses in eating and drinking, which before were productive of no inconvenience. The countenance not unfrequently at this early period, discovers evident indications of the

latent affection: the eye loses its wonted vivacity and expression; the complexion becomes pale and sallow; and the nose, lips, and eyelids, assume a livid hue. There is probably a slight degree of œdema about the feet and ankles, and the urinary secretion is irregular, being sometimes scanty, and high coloured, with sediment, while at others, and in the same person, it is in every respect natural. In some of the cases in the appendix it will be observed, that a very copious secretion of limpid urine has preceded the disease, and in others, alternated with a scanty high coloured turbid water. Although the appetite be not always impaired, yet respiration is sensibly more impeded after eating, especially if the stomach be overloaded, and the food be difficult of digestion, and the sense of faintness about the pit of the stomach changes to an uncomfortable fulness and oppression,—a proof that the digestive powers are weakened. The patient can as yet lie down in bed, but his sleeps are short, hurried, and disturbed by frightful dreams; he is obliged, by a peculiar restlessness not easily to be described, to change his posture frequently, and he probably lies already with more ease on one side than

the other, sometimes the opposite to that he has been accustomed to; in short, although he neither thinks himself, or is thought by others, seriously indisposed, there is every indication of an impaired state of the functions of some thoracic viscus.

These symptoms are seldom constant at first, but return only at irregular intervals, unless the causes which originally produced them continue to be applied without intermission, when they advance with more or less rapidity, until the disease assumes its true form. If a state similar to that which has been described, however obscurely marked the symptoms might be, supervened in persons of a full corpulent habit, especially if they have been great beer or porter drinkers; in those who have suffered severe or repeated attacks of cough, catarrh, asthma, or pneumonic inflammation; in females at a certain period of life, that is, between forty and fifty years of age, or upwards, whose strength had been exhausted by frequent parturition, the cares, fatigues, and anxieties, attendant on a large family, in a certain sphere of life; in persons whose constitutions had been broken down by frequent blood letting, inordinate menstruation,

or other evacuations; by intemperance in the use of inebriating liquors; or in those of a sedentary life, of a thoughtful and studious turn, more especially if the transition was sudden from active occupations; I should have no hesitation in concluding that water began already to be effused in some of the cavities of the chest, or that such a morbid condition of the thoracic viscera existed, as would speedily lead to it.

In all my patients these, or the greater number of these symptoms were observed to precede its more striking characters; and since my attention has been particularly directed to its investigation, I have more than once predicted its approach for some time before there was yet reason to suspect any effusion, as some of the annexed cases will demonstrate. At this period, however, it is very generally mistaken for other disorders; nor is this to be wondered at, when it so often eludes detection in the advanced stages, and when perhaps few, if any, of the symptoms described by nosologists as peculiar to it, can as yet be observed. But the importance of an early discovery of its real nature is so obvious, that too much attention cannot be paid to its primary stages,

especially if they arise under the circumstances mentioned above.

The progress of the disease from this, to the more violent or confirmed state, is more or less rapid, according to the constitution, and age of the patient, degree and nature of the remote causes. It is proper to observe that by removing the causes when obvious and within our reach, by attention to appropriate regimen, and the occasional use of medicine, instances have occurred, in the author's practice, where its further progress has been checked, and the patient enjoyed tolerably comfortable health, for several years, even at an advanced age. To the credit of the subject of Case 18, and for the encouragement of others who may be affected in a similar manner, be it recorded, that this happened in a degree that was highly pleasing.

It sometimes steals on by slow and imperceptible gradations, and assumes a serious aspect before it has been suspected; while at others its progress is extremely rapid. In the following history of particular symptoms, the order of precedency in which they occur is as much as possible observed.

SECT. III.

History of particular symptoms.

Impeded respiration.—In every case which fell under my observation the breathing was more or less affected; even in the early stages, before the nature of the disease was suspected, this invariably happened on motion, or from any causes which quickened the circulation. And this symptom seems to have occurred likewise in all those recorded by the best writers on the disease. In the works of the celebrated Morgagni,* where much valuable information has been collected on its history, and the appearances on dissection, two cases are mentioned, the one by Ruffius, of a virgin, and the other by Wepfer, of a young man, which seem at first sight to furnish exceptions to this.† But as has been very justly observed

* Letter xvi. p. 397. obs. 27.

† We are told, "that the whole thorax of the virgin was filled with a foul and ill savoured water, and that she continued quite to death without any difficulty in breathing;" and that "in the right cavity of the chest of the young man three pints of serum were found, and one in the pericardium; yet that he was able to the last instant of his life to lie down with his head in a low posture, and even ascended steep places without any impediment, and went to the top of them rather by running than by walking a slow pace." Sepulchret. Lib. ii. sect. vii. obs. 91. et in additam obs. 48.

by Morgagni himself, though it be affirmed in the first part of the history of these cases, that respiration was not affected, yet from the subsequent detail, the reverse must obviously be inferred. "For," continues the history, "the young man did these things when as yet there seemed no water effused," but that afterwards, "he had breathed with difficulty, and though he walked with a slow pace, he had taken breath frequently with a distended chest;" and that the virgin, "had extended the alæ nasi at the time of expiration, but had not any remarkable dyspnœa."* Any instances of this kind which may be found in authors must be attributed to inattention or inaccuracy in the relation. It is scarcely possible that any considerable accumulation could exist in any of the cavities of the chest without corresponding interruption to respiration, especially on motion.

It varies materially in degree and kind, in different cases and stages; and this variation sometimes leads to a tolerably correct judgement of the seat and extent of the water, as well as of the morbid condition of the thoracic viscera which occasioned its effusion.

* Ibid.

It is sometimes quick, hurried, anxious, and irregular; while at others it is slow and laborious: at times it is performed with a peculiar wheesing noise as if the air were passing and repassing with difficulty through a narrow straightened, or as one of my patients* expressed herself, "through a metal tube."

Such is often the interruption to the functions of the heart and lungs, that the aid of other muscles, beside those usually concerned in respiration, is exerted, in order to elevate the ribs, and enlarge the capacity of the chest, and thus admit of a more free circulation of air and blood through them. With this view the arms are frequently thrown above the head, while the head itself, the neck,† and indeed the whole chest, are suddenly raised erect, and a full laborious inspiration made at the same time, with the mouth open, and the *alæ nasi* expanded. In very urgent cases these assume the appearance of convulsive paroxysms, there being now and then short intervals of repose.

* Case 54. Vide appendix.

† This symptom is particularly noticed by the best writers on the disease.

The patient in some cases, breathes with most ease stooping, or with his body inclined forward.

If the chest and abdomen be exposed to view, the muscles which surround them may be observed to labour exceedingly. Some of my patients, especially the subject of case 77,* have said "that their breath appeared to come from the lower part of the body;" an observation that serves to convey a striking idea of the extreme difficulty with which respiration is sometimes performed. In some of the worst cases, however, the patient enjoys, on rest, or the abstraction of external stimuli, a momentary repose, yet the dreadful paroxysms described seem to return with redoubled violence afterwards: but no well formed case will be found with complete intermissions as in angina pectoris, which may serve to distinguish the one disease from the other.

Every muscular exertion, or cause which accelerates the circulation, aggravates this symptom: hence running, quick walking, especially up an eminence, talking, laughing, and singing, sudden passions or emotions, are extremely

* Vide appendix.

prejudicial, and seem at times to threaten immediate suffocation; the whole face becoming livid, and even black. The act of dressing and undressing, particularly of stooping to buckle the shoes, are extremely irksome and fatigueing.

If previously unacquainted with the patient, the breathing has been sometimes so hurried on my first visit that some time elapsed before he could describe his complaints; and, at all times, he expresses himself in short interrupted sentences.

In a recumbent posture.—The learned author of Zoonomia observes* "that dropsy of the chest is attended with an absolute impossibility of lying down for a few minutes," and farther in the same page he adds "the patient cannot lie down for half a minute." But this observation applies only to the worst cases and advanced periods. In the early stages, when the quantity of water is small, the patient can sometimes lie down in bed without inconvenience, though an elevated position of the chest, with the head somewhat low, is generally preferred. I have said *sometimes*, be-

* Vol. ii. p. 107.

cause if it be suddenly effused, two or three ounces will occasion as much inconvenience as the same number of pints will do, if gradually collected, so that the heart and lungs have had time to adapt themselves to the pressure. This is strongly exemplified in Case 39,* where the heart, and left lobe of the lungs, were thrust into the right cavity of the chest. Hence, in forming the prognosis, it is of consequence to ascertain how far the causes may have been such as to occasion a more or less rapid accumulation.

But although in some instances the patient be able to lie down without inconvenience, he is often suddenly roused soon after going to sleep by a most distressing sense of suffocation, oppression, and extreme anxiety, about the præcordia, attended with palpitation; and if able to walk, he probably runs to a window for fresh air, and makes several laborious inspirations before he recovers his ordinary breathing.

Under these most distressing paroxysms the face is generally livid and even black, and together with the neck and chest, is covered with profuse sweats, appearing in large drops,

* Vide appendix.

which are generally followed by a remission of these symptoms, but not that complete intermission which usually succeeds the asthmatic paroxysm. The intellectual functions are, under these circumstances, much disturbed, the patient talking incoherently and labouring under temporary delirium, which subsides with the paroxysm.

As the disorder advances he is thus immediately attacked on attempting to lie down; so that at length he is obliged to seek repose in a chair, or in bed, supported by pillows, in a sitting posture, sometimes with the chest inclined forward: even in this situation, as the quantity of water increases, he is suddenly awaked by similar sensations, and dreading the repetition of this alarming symptom, he has no natural refreshing sleep, though he be overcome by constant drowsiness and stupor.

On one side.—As the water is seldom equally diffused in the cavities of the chest, so there is in general greater difficulty of lying on one side than on the other; and, as it is sometimes confined entirely to one side, the patient can only lie on this. Diseases of certain viscera, however, in some instances reverse this order, of which a case may be seen in Home's

Clinical Experiments,* and in the works of Morgagni.† And extensive adhesions of the lungs with the pleura costalis, by preventing the water from passing to the most depending part of the cavity, may do the same. Considerable collections of water in the pericardium likewise may have some influence in this respect.

When both cavities are equally distended, the easiest position is on the back with the shoulders elevated.

The cause of this symptom is sufficiently obvious. Any considerable pressure on the surface of the heart and lungs from water must necessarily occasion proportionable interruption of their functions; and this will be increased on motion, or the application of any

* The subject of this case was a taylor æt. 45, "Has been affected," says the author, "for four years with dyspnœa, uneasiness when he lies on the right side, the sensation of something moving in his breast when he turns in bed, and pain and swelling about the liver." When opened, "the lungs adhered almost wholly to the pleura; and in the right cavity was found a pint of fluid, which must have pressed much on account of the adhesion. We found on the right lobe of the liver two contiguous tumours pointing to the ribs." p. 358.

† In the case related by Morgagni, the water was found on dissection in the left cavity, "of which it was full; but she could not breathe in bed unless she lay on the right side. In the right ventricle of the heart was a large polypous concretion, which extended itself from thence into the vena cava." Letter xvi. obs. 12. Vide case 6. Appendix No. ii.

causes which accelerate the circulation, because a greater quantity of blood will be determined to the lungs than can readily pass through them; in a recumbent posture by the water being determined to the upper parts of the chest, and consequently by its pressure on the large bronchial tubes, which are more immediately necessary to respiration than the smaller. On lying on the side which contains the smallest quantity, or none, by the mediastinum, and in some degree, this lung, sustaining its incumbent weight and pressure; whereas on lying on the other side it falls to the most depending part, between the lungs and parietes of the thorax.

It is proper to observe that, beside adhesions of the lungs with the pleura, hydatids, tubercular indurations, or cysts containing a watery fluid within their cavity; polypous concretions within the heart or large arteries; ossifications of their valves, and other organic affections, may have considerable influence in interrupting respiration, independent of the pressure of the water.

Pallid or livid aspect, and other morbid appearances of the countenance.—In no instance of chronic disease is the morbid change of the

countenance more strongly marked than in dropsy of the chest; and it is generally one of the earliest indications of its approach. The *faciei pallor* of chlorosis; the sallow bloated hue of the bilious habit; the yellow tinge of jaundice, convey very imperfect ideas of it; even when combined with this last disease, which sometimes happens, it has certain appearances peculiar to itself. As soon as respiration begins to be interrupted the lips, nose, eye lids, and those parts of the face which are usually florid, begin to assume a livid hue, while the rest of the face is pale and sallow. If the nose has before been remarkably red or carbuncled, the contrast is now very striking. As the disorder advances, more especially as it verges on the last stages; or if the circulation be suddenly quickened by any of the causes mentioned above, all these increase, the whole face becoming livid and sometimes black; and in proportion as it thus recedes from the healthy aspect, it loses its natural warmth, the nose in particular being often extremely cold. The eye by degrees loses its natural expression and vivacity, as indeed does the whole countenance, in which extreme anxiety and suffering are strongly painted.

The conjunctiva looks dull and heavy, and is at times so yellow as to leave no room to doubt the presence of bile in the blood. These appearances afford the strongest evidence of the imperfect oxygenation of the blood, from the great interruption to its circulation through the lungs, and the diminished capacity of the bronchial tubes. From the same causes the veins about the extremities, especially about the hands, may be observed distended with dark, sometimes black, blood.

Diminished high coloured urine.—With few exceptions the urinary secretion gradually lessens in quantity, becomes proportionably high coloured, frequently resembling that of jaundice, and deposits on cooling, a copious sediment of a deep pink, or yellowish branny colour. In a few instances it is of a dark or dusky brown hue, probably without sediment, but with an oily film on its surface, which is to be regarded as a very unpleasant symptom. About three cases occured in my practice in which there was no sensible deviation from the natural state, till toward the advanced stage.

Healthy urine when first voided, especially after a temperate meal, emits an odour that is not unpleasant; but that of dropsy is, for the

most part, offensive as soon as it issues from the bladder, and becomes still more so in a few hours.

The period at which these morbid changes of the urine take place is various. In idiopathic hydrothorax, that is, where the serous effusion first begins in the cavities of the chest, and from causes existing there, the disorder sometimes makes considerable progress before the determination to the kidneys is sensibly diminished, or before the quality of the urine is altered. But though the kidneys be at first in a sound state, yet in proportion as the blood conveyed thither is deprived of a portion of its water their functions will at length be impaired, and the urine will be diminished in quantity and changed in quality. When, however, the kidneys or other organs are primarily affected, or when the dropsical habit had previously existed, as it disposes alike to increased effusion in other parts of the body, from the same causes, so the secretion of this fluid may be preternaturally changed both in quantity and quality, in the incipient stage of this disease, or even before any watery accumulation has actually commenced in the cavities of the chest. But whether the symptoms

of impeded respiration mentioned in the first part of sect. III, have preceded or succeeded this peculiar state, we may with certainty conclude that a fluid is effused in some of the cavities of the chest though there be no other external sign of dropsy.

When the accumulation is sudden, the urine is quickly affected; but when it is very gradual, instances have occurred where there was reason to suspect considerable collections of water without any diminution of this secretion.

The cause of these morbid changes in the urine has been variously explained by the writers on dropsy. To refer to their real causes the principal phenomena of diseases is an object of the first importance, as on this, in a great degree, will depend the successful exhibition of remedies.

This subject shall be considered in a separate section.

Palpitation of the heart, irregularity and intermission of the pulse, may be regarded as one of the most frequent attendants on hydrothorax, and like the interruption of the important function of respiration immediately connected with them, they vary much in degree and kind. In some instances the palpi-

tation is so violent as not only to be distinctly seen through the clothes, but to be heard by a by-stander. In cases 47 and 56, this happened in a remarkable degree, and the pulse was proportionably hard, but regular, so as under any other circumstances to have indicated blood-letting: In one of these it was had recourse to with advantage, the expectoration of pure florid blood pointing out the necessity of it; and had it been performed earlier, and with more freedom, it is probable the relief would have been much greater.

At other times the palpitation is less violent, and in some instances, especially in fat corpulent, or very weak and irritable subjects, it is so obscurely felt as only to be perceived by another person on placing the hand on the seat of the heart; and in such cases it is very aptly termed by the patient, "a constant working or fluttering." But although it be apparently wanting, or indistinctly perceived, on rest or the abstraction of external or internal stimuli, yet on sudden motion or the application of these, it is uniformly present with increased violence.

In some instances when absent, it was excited on attempting to lie on one side. With

few exceptions it is accompanied with corresponding inequality of the action of the artery at the wrist, and the carolids shew this in a striking degree. If the *motus abnormis*, be regarded as essential to palpitation, those cases only in which it is accompanied with irregularity of the pulse deserve this appellation; but this ought not in my opinion to be considered as necessary to it, for in the cases mentioned above, and in many instances of chlorosis, there is only a preternatural increased, and laboured action of the heart, without any irregularity in its contractions, or of the pulse; yet they are invariably termed, and understood to be, *palpitation*.

I have said above, *with few exceptions*, on the authority of the accurate Morgagni. He relates a case of hydrothorax* attended with palpitation, in which he affirms, "the pulsations of the heart and arteries were always observed to be surprisingly unequal; those of the arteries were frequent, and those of the heart, which, when we applied our hands to the thorax, seemed to palpitate, were much more frequent; and this comparison being often and

* Case xv. obs. 30. Vide appendix No. ii.

accurately made, always answered in the same manner." It is, however, extremely difficult if not impossible, to conceive that any material irregularity, or increased frequency of the heart's action could exist without extending its influence immediately to the pulse.

The systole and diastole of the auricles and ventricles succeeding each other so rapidly might occasion this mistake; for on placing one hand on the region of the heart of a person in perfect health, and feeling the pulse with the other, the motions of the heart appear more frequent.

When the palpitation was violent, it was observed that the stroke of the artery at the wrist, if regular, was proportionably full and hard; and when obscure, or when the patient complained of the peculiar fluttering already mentioned, the pulse was likewise feeble. In short they seemed to correspond in every instance.

The pulse in this disease exhibits every variety of irregularity that has been described by authors. In some cases, after a few regular pulsations there is either a complete intermission, or loss of one stroke, or there is a double stroke much weaker, and occupying

the space of time of a regular one, as if the left ventricle endeavoured by two feeble efforts to make up for the want of one vigorous contraction. These intermissions and double pulsations alternate with, or succeed, each other so rapidly that the finger only now and then catches a regular stroke: hence the extreme variation of the pulse in regard to frequency, if the intermissions be not numbered, and the double pulsations be reckoned as two: I have found it to vary from 60 to 140 in a minute.

In the numerous interesting cases recorded in the works of the celebrated Morgagni the state of the pulse is seldom noticed, probably because, there being no fever, it was rarely examined; and when it is mentioned, it does not appear to have been so irregular as I have found it, or as it has been observed by others. The accurate Hoffman, describing a strongly marked case of hydrothorax, conjoined with asthma, where he suspected a polypous concretion in the pulmonary artery, and which proved fatal, observes, "ut ut de pulsu, qui in tali casu plerumque intermittens et inequalis est, nihil relatum mihi fuerit." * It is

* Obs. viii. de Hydrope.

hence obvious that this judicious author regarded irregularity of the pulse as a common occurrence in similar cases, which are very frequent. It may be worthy of remark that, except in one instance, the pulse never returned to its natural state either in those who were permanently cured, or those who experienced only temporary relief, which shews the power and influence of habit, even in morbid actions, when once established.

If relief be obtained soon after the irregularity has commenced, by the evacuation of the effused fluid, the pulse sometimes returns to its natural state.

The palpitation of the heart and inequality of the pulse, may either precede, immediately attend, or succeed, the watery effusion; and it is of consequence to ascertain the time of their appearance: if they precede the symptoms of serous accumulation, especially in old age, or after acute inflammation of the chest, it may be inferred they arise from one or other of the organic affections, of, or near the heart, hereafter enumerated; but if they commence about the same time with, or soon succeed, these symptoms, it may reasonably be concluded they are owing to the pressure of the

water on the surface of the heart and lungs. Any cause interrupting the flow of blood from the ventricles of the heart will sooner or later occasion an irregularity of its action; but the degree of this, and the time of its commencement are various in different constitutions.

In habits endowed with a high degree of sensibility and irritability, after a few efforts more vigorous than ordinary, to overcome the resisting cause, the contractions become irregular, and more feeble; and if the cause be not speedily removed, they remain irregular for life.

But in constitutions the reverse of these, they not only increase in strength, but retain their regularity much longer, sometimes to the advanced, and even last stages, of the disease. Of these facts the cases in the appendix furnish examples.

Œdematous swellings, coldness, and numbness of the extremities.—"Quod dein pedum intumescentiam attinet," says Hoffman, "sciendum est, hanc fere inseparabile hydropis pectoris esse symptoma." * But although this symptom may be said invariably to attend the

* Vol. vii. obs. vii. p. 473.

disease at some period or other, yet the time of its appearance is various. In idiopathic cases, especially if the bodily strength be not much reduced, the disease makes some progress before the ankles swell; but under circumstances of great weakness they very soon become œdematous.

The swelling first appears about the ankles only at night, probably after any unusual exertion, and disappears before morning. By degrees, however, it comes on earlier, and at length soon after getting out of bed, extending upwards, the thighs, scrotum, and indeed the whole body, becoming enormously distended; and in the last stages, suffering very little or no alteration by change of posture. The face, neck, and hands, in some instances become œdematous before the lower extremities; and the limb of one side is generally more affected than that of the other; in some cases, probably owing to the quantity of water being greater in the corresponding cavity than in the other; but in others to the interruption to the return of the venous blood from lying on one side, more than on the other.

Sometimes one of the lower extremities swells earlier, and more, than the other, which

may be determined by the same causes. In the case above alluded to by Hoffman, the scrotum, left foot, leg and thigh only, were swelled; in the left cavity of the chest were found seven pounds of water.

The anasarcous limbs of genuine hydrothorax are colder, and more livid, than those of common anasarca; and this will be found proportioned to the degree of interruption of respiration. In a few instances the blood seemed scarcely to circulate in the lower extremities for some weeks before death, and in one case,* this was observed after the water had been completely evacuated, and the disposition to further accumulation corrected: from being enormously distended, they became completely emaciated; were intensely cold, of a dark livid colour, entirely void of sensibility, and for several days before death they were black, and covered with gangrenous vesicles.

In the extraordinary case of Mary Golding,† where the heart, and left lobe of the lungs were thrust into the right cavity of the chest, the legs were not only extremely cold and of a livid hue, but, to use the mother's words,

* Case 14. † Case 39.

"were dead nearly up to the hips for a fortnight," before the vital spark was extinguished in the interior organs; yet they were at the same time considerably swelled. The lips, face, hands and arms were likewise intensely cold, and equally livid. The irregular and feeble action of the heart, the interruption to the transmission of the blood from the pressure of the water, or other causes, and the consequent imperfect oxygenation of the blood, afford a satisfactory explanation of the coldness, numbness, and livid colour, of the extreme parts. In the few cases where the action of the heart was vigorous, and the pulse regular and full, the legs retained a considerable degree of warmth though distended with water.

The being suddenly roused from sleep by a sense of suffocation, &c. is so frequent an attendant on hydrothorax, that it has been considered by Baglivi, Carolus Piso, Reimannus, and other respectable authors,* as furnishing a

* Jo. Jacob. Vicarius, "believed he could swear," says Morgagni, "that from this symptom in particular, the patient infallibly laboured under a dropsy of the thorax; yet in the thorax of a patient who had it in a great degree, when opened after death, did he find not the least drachm of serum or water, either in the right or left cavity; on which he cried out with an ingenuousness never sufficiently to be commended, and full of wonder, *Oh how fallacious sometimes are diagnostics!*" (p. 384, et seq.) "He afterwards observes, that this symptom is not

certain diagnostic of the presence of water in the chest. But others, and on better grounds, contend that since it is sometimes observed to attend disorders unaccompanied with serous effusion, no reliance is to be placed on it alone, "though it is not to be despised," as Morgagni justly observes, "if it be joined by other symptoms which indicate the presence of water in the chest."

This symptom, like every other individually considered, affords no positive evidence of the presence of water; but when united with the other leading ones mentioned, however obscurely marked these may be, it ought to remove every doubt as to the nature of the disease. But there are certain circumstances which determine its presence or absence, even in the same person, deserving attention. The patient, for instance, finding respiration performed with great difficulty in a recumbent posture, naturally looks for that position in which he breathes with the greatest freedom.

to be depended upon, unless the feet swelled *after* it, and not *before* it, wherefore," concludes Morgagni, "neither this symptom will be of itself, and without frequent hesitation, considered as the most characteristic mark of the disease, since it sometimes appears in others also, and since it is even not very seldom wanting in those, who have appeared after death to have laboured under this disease." Letter xvi. obs. 11.

He goes to bed therefore with his shoulders raised up with pillows; and may thus for a time escape this dreadful symptom, which before harrassed him. But if, forgetting his former sufferings, he should chance to seek repose without this precaution, especially with a full stomach; or if the pillows should slip from under his chest during sleep, or by the weight of the body, they should be compressed so as to place him nearly in a recumbent posture, this symptom will probably occur. Hence it may arise or not, under different circumstances, in the same person. At first, it comes on only at certain intervals, after a long sleep; by degrees the returns are more frequent, and the patient is roused soon after falling asleep; at length immediately on lying down, and in the advanced and last stages, it harrasses him by day as well as by night, and in every posture: I have repeatedly witnessed it, as he slept or dosed in his elbow chair.

These may be said to constitute the leading or characteristic symptoms of the disease under consideration; but there are many others, which, though not essential to it, very frequently occur, and therefore no less claim the attention.

A cough, that is either hard and dry, or in which a copious yellowish, or what has been termed by authors, a *catarrhous matter*, is expectorated, is a frequent and distressing attendant upon it, as every other symptom is thereby aggravated. Of this Hyppocrates was fully aware. "A cough," says he, "upon those that are troubled with a dropsy is bad."* And again, "A dropsy attended with a cough is a desperate disease."† In fat corpulent subjects, a cough or catarrhal affection, if long neglected, improperly treated, or not relieved by a copious expectoration, is sometimes followed by serous accumulation, of which instances may be seen among the annexed cases.‡ Very fat children, of a lax flabby fibre, sometimes fall a sacrifice to this disease from similar causes, without its real nature being suspected, till it has been detected on opening the body after death. I have met with several instances in which there seemed every reason to believe death arose from this cause.

In such habits, the heart and lungs, and indeed the whole chest, being oppressed by

* Hipp. aph. xxxv. sect. 6.

† Aph. xlvii. sect. 7. ‡ Vide case 19.

inordinate quantities of fat on the one hand, and the bronchial tubes being choaked up with viscid mucus on the other, the blood necessarily circulates with difficulty through the pulmonary vessels: hence accumulations in the right side of the heart, distention of the capillary vessels, diminished absorption, and increased serous effusion, (which last is favored by the laxity of fibre peculiar to such constitutions) are the natural consequences. Hence too the reason why habitual catarrh, and chronic asthma, so often terminate in hydrothorax, especially in such subjects. The frequent action of coughing likewise causes an unequal distribution of blood through the lungs: to some parts it is determined with additional impetus, while others do not perhaps, receive it in sufficient quantity, or with due velocity. Several patients applied to me in the spring, or early in the summer, labouring under this disease, evidently originating in a succession of severe coughs, or colds, which had probably been neglected or improperly treated, the preceding winter.

Blood is sometimes expectorated in great quantity, and is always an alarming, if not a fatal symptom. Some persons, however,

pass through the disease without a cough.

Pains in different parts of the chest are common in this disease: they vary in degree, kind, and extent, according to the causes which produce them, being sometimes superficial and affecting only the intercostal, or other muscles concerned in respiration, while at others they are deep seated, and may even be traced to the heart itself, causing a most distressing sense of constriction, as if something were pressing upon, or closely embracing this muscle. The pericardium has been distended in some instances to such a degree as to occasion by its pressure upon the diaphragm very considerable uneasiness, "bearing down, or oppressive weight, in the lower part of the chest," extending to the lumbar region in the direction of the *crura* of the diaphragm. This has also happened, though in a less degree, from water in the sacs of the pleura. The pains are either acute or obtuse, fixed or wandering, or return at certain intervals; and they move in various directions, not unfrequently up to the neck and throat, producing a sense of constriction, as if a cord were drawn tight round these parts; as well as to the shoulders and arms to the extremities of

the fingers, alternating, or attended, with a sense of numbness. The *brachii stupor*, however, I have not met with so often as might be expected from the histories given by the writers on this disease, though the patient was always questioned as to its presence; but there is for the most part a soreness or sense of weariness about the muscles surrounding the chest.

External swelling and fluctuation of water.—A tumour, elevation, or unequality of some part of the chest may sometimes be observed; or if the body be exposed to view one side appears larger than the other.* This swelling is more frequent, and sometimes very considerable, about the *serobiculis cordis*, and epigastrium, than any other part. In some cases it is occasioned solely by the descent, or protrusion, of the diaphragm, from water; in others by the liver being thrust downwards, and forward, from its natural seat,† either in

* Vide Case 39. appendix. Also Cullen's First Lines, vol. iv. p. 314.

† Vide Morgagni, letter xvi. obs. 26. Appendix, No. 2. Case 14.

In the case here referred to the liver was so much depressed as to have been taken for the pancreas.

a sound, but more generally in a diseased state, by the same cause. Hence the tumour is either soft, smooth, and elastic, or hard, knotty, and not yielding; and it is more or less painful on pressure.

In regard to the fluctuation, enough, it is presumed, has already been said to satisfy the mind that it is a symptom entirely of the imagination, and that the error which Hippocrates and some of the earliest writers fell into by enumerating it among the signs of the disease was perpetuated by succeeding writers copying it from each other. But though it cannot be either heard, or felt against the fingers by the usual tests used in ascites, yet the patient sometimes observes that he has the sensation as if water were contained in the chest, passing from one side to the other on turning, or "as if the heart were moving in a fluid." That it may never have been heard on violently shaking the chest, and holding the ear close to the side as advised by Hippocrates, I will not pretend to determine; but as it is here intended only to record such symptoms as have really been observed, this cannot be admitted among the number. The lungs and other organs of the chest fill its cavity so accu-

rately, that it is difficult to conceive how the agitation of the water could be heard "as in a bladder half filled with any fluid," or as may be done in the stomach, when, together with a watery fluid, it is partially distended with air. Some authors, however, were fully aware of this. My late worthy and much respected friend Dr. D. Monro, in his excellent treatise on dropsy, has remarked, "that water collected in one or both cavities of the thorax is with difficulty discovered, the ribs and tense short intercostal muscles, not allowing the water to extend itself outwardly, or the fingers to feel any fluctuation.* "This symptom," says Morgagni,† "neither is, nor indeed can be, perpetual: for besides that you will look for it in mine and Valsalva's observations in vain, the same also happens in most of those of others; who, it is to be supposed, would not have passed over this clear and evident mark of the disease, had it really existed; and you will find it expressly denied by some that it ever existed."

Natural functions.—The stomach and alimentary canal seem to suffer less in this than

* Page 186. † Letter xvi. obs. 37.

in any other disease in which the functions of organs so essential to life are so seriously deranged. In many instances the appetite for food is not impaired; but in all, it cannot be indulged without more or less inconvenience, there being invariably a sense of fullness and distention after eating, attended with increased dyspnœa, and general suffering, especially if the stomach be overcharged and the food be difficult of digestion, to which a degree of flatulency, which for the most part occurs, very materially contributes. During my visits I had frequent opportunities of seeing the patient both before and after eating, and the contrast was very striking. In a few instances the peculiar sense of faintness or sinking at the stomach was relieved after a temperate meal; but this happened at an early period. Wine and other grateful cordials afford considerable, but, for the most part, only temporary alleviation of this, and indeed of every other, symptom; insomuch that it was found very difficult to restrain the inordinate cravings of the patient for these substances.

When the disorder is the consequence of exhausted constitution from repeated excesses in drinking, or other debilitating causes, as

might naturally be expected, the powers of the stomach are weakened, and the appetite is impaired, from the beginning.

As is the case in other dropsies the tongue is sometimes foul and furred, with more or less thirst; and these increase with the disease. The bowels are various; but they are more generally bound than otherwise.

The pressure of the water on the œsophagus sometimes occasions a difficulty in swallowing: to such a degree did this occur in one instance* for several days before death, that only the smallest quantities of liquids could be conveyed into the stomach. Though the craving for food was intolerable, yet the repeated efforts and struggles to swallow solid food were vain. In these the patient was more than once nearly suffocated.

Stupor, drowsiness, and other affections of the head.—From the inability of lying down in bed, or from the dread of being suddenly roused and threatened with suffocation on going to sleep, the patient seldom enjoys long or natural repose, especially in the advanced periods of the disease; but he is overcome by

* Vide Case 39. appendix.

a constant drowsiness and stupor, to such a degree at times that when persons are talking around, and even to, him, he is dosing or sleeping, now and then starting up suddenly; and talking or muttering incoherent sentences. But when his attention is roused he generally becomes sensible, and talks rationally, but immediately falls into the same state of stupor again. In a few instances there is a delirium approaching to a maniacal state; and in one case* such was the degree of derangement of the intellectual functions, that the patient, who had been unable to move for many days from his elbow chair, walked up stairs in the night, when the family were in bed, and alarmed them not only by his unexpected presence, but by the positive assurance "that some thieves were breaking into the house and going to murder him." The dreams and reveries are of the horrid and frightful kind. The languid circulation and accumulation of dark, or imperfectly oxygenated blood, in the head, serve to explain the cause of these distressing symptoms.

State of the animal functions, and of those of the habit at large.—As might be expected

* Case 61.

from the nature of the remote causes, this disease is ushered in under circumstances of general or partial debility. The muscular fibre is for the most part soft, flabby, and unequal to a vigorous contraction. If the blood be examined it will appear generally dark on flowing from the vein, and on coagulating, the crassamentum will be loose and soft, sometimes remaining in an uniform flabby mass, scarcely separating from the sides of the vessel, the bottom of a dark livid colour; yet the proportion of serum is large. In its texture it resembles that of dropsy in general; but is of a much darker colour. When the disease chances to be attended with inflammatory symptoms which is to be regarded as a rare and accidental occurrence, the blood may be otherwise than as here described.* Even in those cases where the pulse was remarkably full and hard the blood exhibited no buff on its surface, but was loose in its texture.

Every part of the body shews in a striking manner the effect of this morbid change of the solids and fluids, as has been in a great

* Case 5, in the appendix, taken from Home's Clinical Experiments, an instance of this kind is recorded: the blood was very buffy, and the patient seems to have been cured by seven bleedings.

measure already demonstrated. Not only those parts the most distant, but the nearest to the heart, feel the influence of a languid, and irregular circulation of dark venous blood. The whole surface is cold and chilly, except under the circumstances mentioned above, when profuse sweats break out on the upper parts of the body; the natural perspiration is diminished, and sweat is with difficulty excited by sudorific medicines.

Progress, and termination of the disease in death.—Many diseases have a natural termination in health without the aid of art. The efforts of nature, or the *vires medicatrices naturæ*, however they may have been ridiculed by a few modern medical philosophers, the Brunonians in particular, if their salutary efforts be not counteracted by the officious interferance of art, will frequently conduct the patient through the most perilous situations, to perfect health. But in many other diseases nature is incapable of affording any effectual assistance; and in none is this to be lamented more than in that under consideration. Its progress to a fatal termination is regular and uniform, when art has not interposed her salu-

tary aid; and this has been too generally the case under medical treatment, in so much that it is numbered among the incurable diseases by most medical writers. In consequence of the increased pressure of the accumulated fluid on the heart and lungs, the patient may be said to be suffocated; or he dies apoplectic, from the pressure of dark venous blood on the brain, not unfrequently accompanied with serous effusion, either on its surface or in its ventricles; so that death in this disease is sometimes analogous to that from drowning or hanging. The fatal event is generally sudden, and sometimes unexpected, probably when there appeared to be a momentary interval of repose, frequently during, or after a meal, or any sudden bodily exertion.

The sudden termination in death is particularly mentioned by the best authors on the disease. Dr. Withering, speaking of a case which proved unexpectedly fatal, remarks, "This case, as well as case vi. is mentioned with a view to demonstrate to younger practitioners, how sudden, and unexpected the death of dropsical patients sometimes happens, and how cautious we should be in assigning causes

for effects."* When my patients refused to pursue the plan of medicine recommended, I apprised the friends of this circumstance, and my predictions were in general verified. But in those who conformed, and in whom the water was repeatedly evacuated, and the disposition to its farther effusion corrected, but who eventually died of exhausted constitution, or decayed organs, the approaches of death were marked by a slow and gradual pace, as in many other chronic diseases. The reason why it should terminate suddenly in death may be accounted for from a consideration of the organs affected, the nature of the disease, and occasional causes.

* Case 22. p. 27. See the cases from Morgagni in Appendix No. 2.

CHAP. II.

SECT. I.

Dropsy of the Pericardium.

FROM the belief which has generally obtained, among the writers on hydrothorax, that the only certain mode of evacuating the sacs of the pleura and pericardium of water, was by artificial outlets, infinite pains were taken to establish the discriminating characters of each, because in the one, the operation might be performed with perfect safety, while, in the other it was attended with imminent danger, if not with certain death. Some indeed have been bold enough to advise puncturing the pericardium.*

When however, it is affirmed that the *paracentesis thoracis* is seldom, if ever, necessary, or justifiable, and that the means hereafter

* Senac, who writes ably on this disease, after observing, "that it is frequent, difficult to be known, and more difficult to be cured," deliberately recommends puncturing the pericardium, with this precaution, and in such a manner, "that the mammary artery may not be wounded." L. iv. C. 5.

recommended will be found equally efficacious in whichever of these cavities the water may be collected, it will be superfluous to dwell any longer on this subject. We shall therefore proceed to bring into one view some of the opinions of the best writers on hydrocardia.

The celebrated Morgagni* affirms that he never saw an instance of it unaccompanied with water in some of the other cavities of the thorax.

The learned Dr. Freind† not only asserts the same, but contends, "that it was to be sought for rather among the inventions of artists than in the works of nature;" and farther, "that Galen says not a word upon the subject." In this, however, he has committed an oversight. The dissections of the antients were entirely confined to animals, but, from what Galen observed in these, he concludes, "a probable conjecture may be drawn that men are also troubled with similar disorders." He even describes the manner in which it may sometimes arise, as from hydatids being

* Letter xvi. obs. 20.

† Hist. de la Med. P. 2.

ruptured within the pericardium; and offers some conjectures on the circumstances that may lead to its discovery. "The palpitation of the heart," says he, "either happens by itself or with some indication that the heart is moved in a fluid; nor ought it to seem wonderful," continues he "that so great a quantity of water is accumulated, sometimes, in the coat surrounding the heart, so as to prevent it from being dilated." *

Morgagni, from never having observed it alone, naturally acknowledges the great difficulty of deciding on its peculiar symptoms; and hence says he, "observations made upon it, if it be at any time found to be solitary, ought to be very diligently attended to." †

Grætsius asserts ‡ "that he could find scarcely any signs by which even the most experienced physicians could rightly distinguish these two dropsies, the one from the other; unless one should perhaps say that the faintings were more frequent in this than in the other, and the difficulty of breathing more mild." And, after enumerating several other

* De loci Affect. c. 2. † Ibid. obs. 20.

‡ De Hydrope Per. sect. 4.

symptoms common to both, he thus proceeds: "the pulse grows extremely small; a weight is felt pressing, or constringing the heart; a slow fever with thirst frequently comes on;" and farther, when speaking of a case where the pericardium was so distended as to fill the whole cavity of the thorax, and where the surface of the heart was eroded, "the patient," says he "felt an oppressive weight in the lower part of the chest," (in the left side it is presumed) "and being long troubled with other symptoms that generally indicated a dropsy of the thorax, at length died as if suffocated by this disease, as was supposed." In a case* from Valsalva by Morgagni, where the pericardium contained more than half a pint of limpid serum, and the two cavities of the chest some fluid, the only symptoms described, are a slow fever for many weeks; a tumour of the feet, a dry cough, a dryness of the fauces; short quick breathing; and a pulse scarcely perceptible." A polypus was found in one of the ventricles of the heart.

"A thirst so rarely attends it," says Morgagni† "that I would not have it mentioned

* Appendix, Case 3. † Ibid. obs. 46.

among the symptoms of the disorder, especially as our Saxonia has expressly asserted there is no thirst." Valsalva on the contrary says "that as there was neither a thirst or a dryness of the fauces always attending a dropsy of the thorax; so it *sometimes* happens that there is none also in this. Wherefore the absence or presence of thirst will not certainly distinguish these two disorders."*

In the *Sepulchretum Anatomicum*† cases are recorded of this dropsy alone, as well as conjoined with that of the chest, and other disorders; but nothing is found in these histories that is not peculiar to collections of fluid in the other cavities of the thorax.

Among other signs, "the sensation, as if the heart were moving in water," is mentioned.‡ A vehement palpitation of the heart to which the patient had been subject a considerable time, and a dyspnœa are the principle symptoms dwelt upon in a case where "the pericardium was swelled out to a vast tumour."‖

* Ibid. † L. ii. s. i. obs. 86.

‡ Ibid. s. 8. obs. 29.

‖ S. 8. of 21. § 4. 10.

Boerhaave, who wrote some time afterwards expressly affirmed, "that from the *hydrops pericardii* wonderful palpitations of the heart are brought on."*

On the other hand however, Reimannus observes that palpitation is sometimes wanting.† Diemerbroeck also denies that in any of those he had dissected there had been any palpitation, though they had a dropsy of the pericardium‡ and affirms "that he found the pulses very languid and few; and that palpitation was excited rather by any kind of liquid, although small in quantity, so that it could but irritate the heart by any vellicating quality." Nor does Barrere mention this symptom in the history of five cases related by him.

Many other well authenticated instances are to be found in medical writings of this disease, even with considerable erosions of the surface of the heart in which no mention is made of palpitation;§ and since numberless instances

* Prælect. ad Instit.

† Act. N. C. Tom. I. obs. 170.

‡ Sepulch. Sect. ead. 8. obs. 22.

§ Vide Centuriæ Cesar. Acad. obs. 141. Sepulchret: L. 2. S. 2. obs. 3. cum Schol.

are to be met with of palpitation of the heart without any water in the pericardium, this symptom alone, it is obvious, is not to be relied upon, but ought invariably to be had in view before we decide on the nature of the disease.

Stalpart* gives the history of the case of a girl who was cured by him, "whose face was pallid, very much swelled, and had never menstruated, in whom he could very distinctly hear the agitation of the water in the pericardium when the heart was beating, (for she laboured under a palpitation of the heart"). But I perfectly coincide in opinion with the accurate Morgagni, in his comments on this case: he very justly observes that as the real nature of the disease was not confirmed by dissection, and since it so readily admitted of a perfect cure, no certain inference could be deduced from it. It is probable that it was no more than a case of confirmed chlorosis, in which disease, not only all the symptoms he has enumerated but the addition of œdematous ankles and indeed œdema of almost every part, even the countenance, are frequently observed to occur.

* Cent. I. obs. 36.

In the case of a boy, by Vieussens,* "from a lively, brisk, and well coloured youth, he became sad, slothful, and pallid, with his eyes less vivid than usual, and his lips and eyelids verging to a leaden colour. If he walked a little faster than usual, or went up stairs, his respiration became difficult, and the palpitation of his heart with which he was constantly troubled, more violent. The disorder then greatly increasing, he lost his appetite for food, and his bodily strength, the extremities were constantly somewhat cold, and his feet very much swelled; but his pulse was always very soft, weak, small, frequent, and somewhat irregular. Finally, being taken with a slow fever, he died."

Another,† in which the collection of water was much more considerable, "was a man of a melancholic temperament who had always been extremely well in health 'till a year before, when he began to labour under a difficulty of breathing which had so encreased by degrees, that at length, for three or four months together, he was forced to sit up in bed night

* Traite du Coeur, ch. i. Appendix 2. Case 11.

† Ibid. Case 12.

and day, for fear of suffocation. He was at that time, lean and without any swelling at all. Hands and legs were for the most part chilly; eyes dull and heavy; face and lips of a *dark iron* grey. He lay with equal uneasiness on both sides, and on his back with still greater difficulty, and the colour of his face became more dark; pulse more small, frequent, and unequal; and the extreme parts more cold. This man, although he could go from the bed to the fire by himself, yet died the next day at dinner, suddenly." Vieussens both foretold the disease and death. And from comparing these two cases together, he was led to distinguish the same disease soon after in another boy; although it was joined with dropsy of the thorax and other diseases.

The symptoms in these two cases are so strongly marked and so well described, that I could hot help transcribing them at full length.

But this excellent author, after having confessed he had been deceived with another great man in distinguishing the disease in a certain youth, thus ingenuously expresses himself: "it is not so easy to know the dropsy of the thorax as some physicians believe, who, being ignorant of anatomy, ascribe too much

to themselves; and who never imagined they ought to have dissected bodies, or inspected them when they were inspected by others;" and, continues this celebrated writer, "for those who have inspected many have at least learned to doubt, when the others who are ignorant of anatomy, and do not take the trouble to attend to it, are in no doubt at all."*

Barrere† from the cases of five patients which were found on dissection to have had a dropsy of the pericardium reckons as diagnostics of this disease, "an œdema of the feet, a pale countenance, a small quick pulse, obstructed respiration, difficulty of lying down in bed, together with a sensation of suffocation, recurring from time to time." He acknowledges, however, the difficulty of distinguishing the one from the other.

Senac‡ has with great accuracy enumerated the symptoms of this disorder, as well from his

* To no period did this observation apply more aptly than it does to the present.

† Observat. Anatom. Vide etiam Van Swietens Commentaries, Sect. 1219. Vol. 12. p. 263.

‡ De la Structure du Coeur, L. IV. c. 5. Tom II. p. 356. et seq.

own, as from the observations of others, and, mentions a sign, which, if it always existed, would be more certain than any that has been described; viz. "An undulatory motion between the 3rd. 4th. and 5th. ribs (of the left side it is presumed) when the heart palpitates."

Dr. Darwin observes, "if the pericardium is the principle seat of the disease, the pulse is quick and irregular. If only the cavity of the thorax is hydropic, the pulse is not quick or irregular."* But that this assertion is in direct contradiction to the observations of the best writers on the disease, as well as to those which the author's own experience has enabled him to make, will appear sufficiently obvious from the preceding history, and the annexed cases.

What has been said above on the dropsy of the pericardium, and a great deal more might be added from various authors, serves to demonstrate the uncertainty of relying on any individual symptom as a diagnostic in either of these diseases, since it is obvious that no one has as yet been mentioned which does not occasionally occur in the one as well as the other.

* Cl. ii. 2, 3.

The great difference of opinion, and contradictory evidence, respecting the presence or absence of palpitation, and indeed of some of the other leading symptoms, may be referred to the causes already mentioned in delivering the history of hydrothorax;* to which, it may be added, that if the pericardium be distended with water, the stroke of the heart will be obscurely, or perhaps not at all felt through the side; and if it contain but little, there may be no palpitation; or if there should be any it may be distinctly seen and felt. Hence neither the absence or presence, nor the degree of this symptom furnish any certain criteria to depend upon.

From the foregoing observations, as well as from those furnished by the annexed cases, the following circumstances are advanced as worthy of attention, and as affording data on which a tolerably correct diagnosis may frequently be formed.

In genuine dropsy of the pericardium the breathing is generally less affected in all positions and circumstances of the body; and it is more of the quick, hurried, anxious, than of

* Page 19 et seq.

the slow laborious kind: in other respects there are some peculiarities. Though the recumbent posture be borne with less inconvenience, yet if the pericardium be much distended, and the other cavities contain but little, or be entirely free from water, a sensation as if something were rolling in the breast, in the region of the heart, is perceived on turning from one side to the other, together with an encreased difficulty of breathing, and a sense of weight, on attempting to lie on either, especially the right.

The erect position too is no less irksome, owing to the pressure and *bearing down pain* of the distended pericardium on the diaphragm, to relieve which the patient is obliged to sit up, or walk, with his body bent forward, or stooping. The greatest ease is in such cases experienced lying on the back with the shoulders elevated and the body inclining to the left side; this indeed will be found the easiest position in every stage of the disease.

The palpitation of the heart, though probably more constant is less violent, and less distinctly felt, being of the weak fluttering kind; and this circumstance, added to the more remarkable variations observed in this

respect on change of position, may serve to account in some degree for the great difference of opinion in medical writings in regard to its presence or absence

The peculiarities of the pulse are still more striking: it is softer, more feeble, frequent, irregular and tremulous, without those occasional intermissions, now and then succeeded by a few regular and full strokes of the artery, mentioned as occurring in hydrothorax. It will be obvious, however, that the palpitation and pulse will vary according to the stage of the disease or the quantity of water contained in the pericardium.

The peculiar sense of sinking, fainting, anxiety, or constriction, will be more constant, and referred more immediately to the seat of the heart.

The countenance is more of the pale, sallow, than of the livid, hue; and the bodily strength is not only more impaired, but there is reason to believe, those of a weak delicate frame are more liable to it than those of strong robust constitutions.

With respect to the swelling of the ankles, defective secretion of urine, coldness of the extremities, and other deviations from the

healthy state, mentioned as common to hydrothorax, experience does not warrant our reliance on any symptom which does not occur in the one as well as in the other.

And it is here to be lamented, that the various morbid alteration of structure of the heart itself, of its valves, large vessels, or other organs within the cavity of the chest, with which these two diseases are generally connected, and by which they are often produced, render the diagnosis much more difficult, since the symptoms peculiar to each of these will be obscured by being blended together.

A learned and ingenious medical friend, of whose judgement I entertain the highest opinion, has favored me with the following remarks and interesting case: "So far," he observes, "as my experience enables me to judge, under the guidance of my memory and written notes, I refer the diagnostic symptoms of the dropsy of the pericardium to *two* only, all besides being extremely uncertain, I mean *the feebleness and fluttering of the pulse;* and the ability of the patient to bear *the recumbent posture.* In the very few cases of this disease where I had an opportunity of inspecting the body, there was always more or less of fluid

in the cavity of the thorax, and generally other morbid signs in that cavity.

The last case of this kind which I inspected is more fully detailed in my journal. The subject was a young man 20 years of age: he had been complaining for some weeks of what he believed to be an irregular ague, because he had frequent returns of chilly fits, with great weakness and loss of appetite. He took an emetic with bitters with temporary benefit. Afterwards he was ordered bark, with a corresponding plan of diet. By the time he had continued this plan for a week, he was seized with a severe dyspnœa. But he said that the chilly fits had left him the third day after he began to take bark. At the time I saw him the dyspnœa was very great, the pulse 130, feeble and fluttering, but without any distinct intermission: the tongue was white; the countenance sallow and dejected; bowels disposed to costiveness, and a prevailing debility over every function. The dyspnœa was encreased by action of every kind; but he could lie down without much encrease of this symptom: he was free from any œdematous swelling. I prescribed moderate purges of calomel, neutreal and diuretic medicines, and blisters; all

without the smallest benefit. The dyspnœa continued to encrease; the pulse became more feeble, and diminished in velocity. The thirst encreased greatly; the tongue and lips became dry, and covered with a dark viscid crust. Still he could lie in the horizontal posture, and the pulse though extremely feeble could not be perceived to intermit to the last period of his existance.

On opening the body we found the lungs adhering firmly to all the neighbouring parts, the sides, the diaphragm, the pericardium. The diaphragm seemed to be thickened by the adhesion, especially on the right side where he complained of the most pain. In the cavity of the thorax were found nearly half a pint of thin bloody serum; it was chiefly in the left side. But within the pericardium there was a still larger quantity of a similar fluid, by computation not far short of a pound. The heart itself was preternaturally hard in its texture; the coronary arteries distended; the whole outer surface of it, and also the inner surface of the pericardium, had a curious granulated appearance.

Here" he very justly remarks, "were seen the effects of a general thoracic inflammation,

which had taken place probably some time before the patient began the use of the bark; though it is equally probable that the bark and corresponding regimen had contributed to accelerate the progress of the disease. The heart and pericardium seemed to be affected in a peculiar degree, and the effusion into the pericardium to have been the consequence. The most striking symptoms were, the patient bearing the horizontal posture to the end, the velocity and fluttering of the pulse; without distinct intermissions, the absence of œdema."

From what has been said therefore * it will be obvious that the more distinctly and clearly these symptoms are marked the greater probability there will be of the presence of water in the pericardium; and *vice versa*, the more they are eclipsed by those mentioned as particularly belonging to hydrothorax the less likelihood there will be of a fluid in this sac. And again, when they are blended together it may be inferred the water is contained in all the cavities of the chest.

But though those who, to extensive experience have united accurate and attentive obser-

* Ch. II. S. I.

vation of the symptoms of these two diseases, more especially if they have been assisted by dissections, may in general be enabled to form a correct judgement of the situation, and extent of the fluid, yet it must be confessed that no one has as yet been fortunate in pointing out any individual sign which may be said to belong exclusively to the one more than to the other: it is only by bearing in mind the whole catalogue enumerated, their gradations, peculiar combinations, and modifications, that any thing approaching to certainty in this respect is to be attained.

SECT. II.

Dropsy or Anasarca of the Lungs.

Such is the conformation of the lungs that water may be effused throughout its substance without any communication with the air vessels. The manner in which this happens may readily be seen by blowing air under its external covering: the cellular substance not only between its surface and the pleura, but between its lobules may be inflated; and it has free communication with the same membrane investing other parts of the body.

As an idiopathic disease, or as confined solely to the lungs it is a rare occurrence, but as a symptom of general anasarca, is very frequent.

If together with œdematous swellings of the external parts just beginning, a difficulty of breathing presently comes on, we may, I think, with great propriety conclude with Albertini that there is œdema of the lungs.*

Van Swieten justly remarks, "reason teaches, and the testimony of Hippocrates† confirms that respiration will be more impeded by a small quantity of serum collected in the interstices of the lungs themselves, than by a much greater quantity extravasated in the cavities of the breast."‡ He farther observes, that the lungs are more easily free'd from serum lodged in their interstices, than when it is in the cavities of the chest.

"I always suspected œdema or dropsy of the lungs" says Dr. Simpson of St. Andrews, "if either the face was turged, or there was ever so small a swelling about the ankles, and at the same time a difficulty of breathing,

* Inst. Bonon. T. I. p. 392 et seq.

† De Intern. Affect. ‡ Aph. Sect. 1220.

especially if the pulse was so suppressed that it could scarcely be felt."*

Dr. Darwin mentions a very irregular pulse as a characteristic symptom of this disease.†

With respect to the pulse my own observations have been very different, having invariably found it more full and regular in this species than in dropsy of the chest.

In a case under my care while writing this‡ where there is every reason to conclude the cellular substance of the lungs is the seat of the disease, and is distended to a considerable degree, the symptoms are as follow:—Not only the upper and lower extremities, but the scrotum, penis, integuments of the abdomen, the face, especially the eyelids, and the neck at times, are considerably distended with water. There is constant dyspnœa, of the slow laborious kind, encreased on first lying down, but after a certain time so much relieved as to enable him to bear the recumbent posture, and enjoy some repose. He has a sense of fullness, tightness, or of suffocation, about the throat and upper part of the sternum. Towards

* Edin. Med. Essays. Vol. V.

† Cl. I. 2. 3. 16. ‡ Vide Case 37.

morning as his breathing becomes more free, the throat, neck, and face swell, but this decreases, and disappears about the throat, towards evening. He is never suddenly roused from sleep, but his nights are in general restless and uncomfortable. The pulse is perfectly regular, remarkably full and slow, being generally about, sometimes under 60, even after walking near a mile to my house. His appetite is good, but to use his own words, "he has not room for his victuals." Urine scanty, of a dark colour, and he complains of much pain in the hypogastric region, a symptom not uncommon in dropsy.

On the whole then since anasarca of the lungs may be regarded as a rare occurrence as a primary disease, and when it does occur may readily be distinguished by the swelling of the face, neck, of one or both hands, especially if these quickly succeed to the difficulty in breathing; by the slow laborious respiration, encreased on first lying down in bed, and on first getting up in the morning, it seems unnecessary to dwell more particularly on its symptoms.

It is sometimes combined with dropsy of the chest; or the water may be contained, partly in cysts within the substance of the

lungs, and partly in the sacs of the pleura; or it may be contained in the former without any in the latter, a very remarkable instance of which is related in the Acad. des Sciences l àn 1732. Mem. p. 350 et seq. The symptoms were, "a grievous asthma, together with a slow fever. The patient could not lie on his back, or on either side, without great uneasiness; hands, arms, legs, and feet were œdematous." See also Van Swieten's Comment. 1220.

Hydatids containing water are not uncommonly found in its substance; but unfortunately the symptoms peculiar to such cases have not been accurately recorded.

The colour, consistence, peculiar appearances, and general properties, of the fluid found in the cavities of the chest are various; but as we are in possession of no tests by which these may be distinguished it will be useless to enumerate their variety. In the subject of case 35 the fluid which was thin on opening the thorax soon coagulated to the consistence of jelly.

CHAP. III.

SECT. I.

Diagnosis.

IN the early stages, especially if the water has accumulated slowly, it is sometimes difficult to distinguish the disease. As it may be presumed the symptoms will be obscurely marked, the practitioner, even if he suspects it, is unwilling to believe he is to have so formidable a disease to contend with, unless there be external signs of dropsy, or some particular circumstances to rouse his attention. In the advanced stages however, although there may be room for doubt as to the exact seat and extent of the watery effusion, I cannot subscribe to the opinion of those who contend that the diagnostic signs are always doubtful, and to be discovered with extreme difficulty, the grounds on which some of these are founded being very erroneous.

In a dissertation * on the diagnostic signs of

* D. Joan. Caspari de Rueff, De Hydr. Pect. certa vel incerta diagnosi. Vide Act. Nov. Phys. Med. Acad. Cæsar. Leopald. Carolin. Nat. Curios. T. IV. Nuremberg.

dropsy of the chest, of which an abstract is given in the Ed. Medical Commentaries,* "the author," say the editors, "sets out with mentioning the difficulty of distinguishing hydrothorax, and the importance of doing so. That Baglivi had pointed out a sudden waking from sleep with signs of suffocation as the pathognomonic symptom. That though this symptom be often decisive, yet that sometimes it is fallacious, occurring where no water could be found in the thorax after death. That he therefore adopts the opinion of De Haen who, from its being sometimes wanting in the most violent hydrothorax; at other times appearing only in the advanced stages, or a few days before death, concludes, it cannot be considered as a pathognomonic symptom.

"In support of this opinion," continue the editors, "the author adduces two cases. The first is that of a man who complained of a dry cough, straitness in the breast, and a great difficulty of breathing, with œdematous swellings of the feet, scanty urine, a nocturnal febrile paroxysm, and the pathognomonic symptom in question. All these complaints

* Vol. I. p. 248.

were soon removed by the use of squill medicines; but a short time after, when he seemed in perfect health, he died suddenly in the night from suffocation. Upon dissection three pounds of limpid serum were found in the thorax which sufficiently proved the uncertainty of the diagnostic. In both ventricles of the heart was a polypus concretion, seven inches in length, to which the author ascribes the immediate cause of his death."

Of the weight which ought to be attached to this symptom in deciding on the nature of the disease; and the circumstances which determine its presence or absence, so much has already been said that it is unnecessary to add any thing farther in this place. It will be seen that in this respect our sentiments accord. But why the author should adduce this case in support of his position I am unable to assign a satisfactory reason.

The disease was very clearly marked; it had the pathognomonic symptom mentioned; the man was apparently cured by squills, very likely means to releive him; and "he died suddenly, in a short time after, when he seemed in perfect health." This last is the only circumstance concerning which any doubt or

difficulty arises. That a man should seem in *perfect health* with three pounds of water in the chest and a polypus seven inches in length in *both* ventricles* is not very probable. It is much more easy to imagine some inaccuracy in the statement than to admit this as a fact. It is not unlikely that the man, finding immediate relief from the more urgent symptoms, when as yet only a small quantity of water was evacuated, might say, comparatively speaking, as I have repeatedly experienced, that he "felt himself perfectly well." If in this case, the original quantity was considerable, say three, and a half, or four pounds, the patient might experience so much ease on its being reduced to three, as to fancy himself in "perfect health." In many of my patients the transition was so great from extreme difficulty, to perfect freedom, in breathing, even as soon as the urine began to flow freely, when I had every reason to be assured very little water was as yet evacuated from the chest, that they repeatedly expressed themselves in this manner. The sudden death of the patient at a time when he seemed to

* There is, it is presumed, some omission or error here. Does it mean, in one of the ventricles, or in each of the ventricles? for *one* polypus could not possibly extend to both ventricles, yet the length seems too great for one.

those about him relieved or recovering is mentioned by the best writers as a frequent occurrence.

"The second case here related," observe the editors, "is that of a man 60 years of age, who was affected at night with a degree of dyspnœa, that he could seldom lie in bed. His left hand and arm were also much swelled and very torpid; which is considered by both Hoffman and Baglivi as a sign of latent hydrothorax. But notwithstanding this, by proper remedies he was soon relieved, and lived till he was 80 years of age; he then died without any symptom of hydrothorax." From all this the author concludes, that this disease can rarely be known while it admits of a cure; that when it is known, it can only be cured by paracentesis; and that while the nature of the disease is doubtful, we should persist in the remedies adapted to humid asthma, by the effects of which we may determine whether the disease we dread be present or not."

It appears no less singular that this case should be adduced in corroboration of his opinion. It is obvious that although the author might originally have viewed it as a case of hydrothorax, he afterwards altered his

opinion, from its favorable termination, or because it admitted of a cure by medicine, for says he, "it can only be cured by paracentesis," and because the patient died twenty years afterwards without any symptom of hydrothorax. But I own, I am disposed to give him more credit than he claims. It seems probable that there was a collection of water in the cavities of the chest, and that it was removed and the cure compleated by the "proper remedies" which were used.

The phenomena of this disease are so striking, the horrors and sufferings of the patient so extreme, as irresistibly to force themselves on the attention. The great variety of cases which have fallen under my care have left so strong an impression on my mind that I think it scarcely possible to be deceived in any instance, although as yet in its infancy. I cannot however indulge the hope that a similar impression will be made on the minds of my readers, by what has been advanced in these pages; yet it is hoped that something has been added to our stock of facts on its history, nature, causes and cure; and that whatever be its fate, it may prove the means of stimulating others to the investigation

of a disease than which none is to be found more interesting in the whole catalogue of human maladies. With this view, some of the sources from which much important information may be derived have been pointed out to the young practitioner. In order to acquire a facility in discriminating with accuracy the most common diseases, it is absolutely necessary to be familiar with their striking characters as delineated by the best writers; for how often do we see those of daily occurrence mistaken by different practitioners? This it is evident, will be more especially requisite in those of a complicated and intricate nature.*

* "Hence," remarks my learned friend on perusing this passage, "I have always been of opinion that of the different branches or departments into which the science of medicine has been divided, pathology is the most essentially necessary to form an able physician. This branch which includes a previous knowledge of anatomy and physiology, is only to be acquired under able and ingenious masters, and at a great expence of labour and reflection on the part of the student himself. It is by an appeal to his pathological knowledge that the physician not only distinguishes morbid from healthy actions in the different functions of the body, but also discriminates among the morbid symptoms themselves, ascertaining which is cause, and which is effect; in other words, which is primary, and which is secondary. Hence it is obvious that though the foundation of pathological knowledge is to be laid in the lecture room, and in academical study, much still remains to be perfected afterwards by practical attention, a close, and correct regard to the early appearances, and subsequent progress of diseases; a deliberate and

The disorders with which hydrothorax is most likely to be confounded are 1. Empyema. 2. Asthma. 3. Palpitation of the heart. 4. Aneurism. 5. The worst cases of chlorosis. 6. Polysarcia: Of these in order.

1. Empyema is preceded by the ordinary symptoms of pleurisy or pneumonic inflammation, receding without the signs of resolution, but with those of suppuration, such as a remission or total cessation of acute pain and fever, changing however, into a dull, obtuse sensation, a sense of weight or throbbing, attended probably with occasional rigors, succeeded by heat, other hectic symptoms, and a copious whitish or reddish sediment

unprejudiced comparison of different cases, and finally a careful inspection of dead bodies. Still I maintain that mere practical labour, even with those who do seriously labour, will be insufficient, without a considerable stock of that precious knowledge which is obtained in schools of celebrity, and that scientific bent, and systematic habit, which the first masters only are capable of conferring. The life of man is too short and his attention too much divided to be a correct pathologist on any other terms. This is the department, then in which professional men are more generally deficient; and this the department in which the comparative force and ability of professional men are to be discerned. I am not afraid to add, that it is to a conscious deficiency in this important and difficult branch of the science, we may frequently, though not always, ascribe the shyness and reluctance of many men to enter into any pathological discussion with their bretheren on the cases of their patients, affecting to rate and estimate such discussions as vague and useless theories."

in the urine. When serous effusion soon follows either of these acute affections, it is not only not preceded by symptoms of resolution or suppuration, but is very speedily succeeded by other dropsical symptoms, which are in general very rapid in their progress.* In consequence of inflammation of the thoracic membranes and viscera, especially of the pleura, a considerable exudation of a fluid resembling a mixture of pus and serum, with whitish filaments or fibres floating in it, is thrown out into the cavities of the chest, which sometimes produces the symptoms of hydrothorax, but more generally those of empyema.

Empyema has at times some of the symptoms of this disease, such as *dyspnœa decubitus difficilis; pedum œdema; urina parca; subita e somno cum palpitatione excitatio.* But from the absence of others, even sometimes of these, from the hectic symptoms which generally attends it, and especially the peculiar circumstances which precede each, the cautious and attentive practitioner, who traces with due care the history of the case from its origin, through all its progressive stages, to the period at which

* Vide Case 19.

his aid is called, will seldom, if ever, mistake the one for the other.

2. Idiopathic asthma unaccompanied with organic affection may be distinguished from the disease under consideration, by its generally returning in paroxysms attended with a dry cough, which, after continuing with more or less violence for a certain time, gradually go off, or suffer considerable remission, with free expectoration, profuse perspiration on the head, neck and chest, and for the most part with a sediment in the urine, leaving the patient in many instances free from complaint.

Respiration is more generally performed with a peculiar wheesing noise, and though extremely difficult and laborious is not so quick and hurried as in hydrothorax; the stricture across the chest is greater also. It is however very frequently confounded with asthma, as may be seen in almost all the writings on the disease, and as I have repeatedly experienced, its real nature having been mistaken until, after death, the quantity of fluid found in the thorax has pointed it out. Asthma, if neglected, not relieved or removed by proper remedies, for the most part ends in dropsy of the chest. When this is the case

the interruption to respiration becomes more constant; the secretion of urine which was before various, now regularly lessons in quantity, with the true dropsical sediment; the extremities swell, and the other symptoms of the disease gradually supervene. Under these circumstances it is relieved or cured by the same means.

3. Palpitation of the heart, if unaccompanied with any morbid alteration of its own substance or its appendages, is seldom constant at first, but returns at irregular periods, generally from obvious causes; and when it becomes constant, unless it be attended with some of the other signs of dropsy, surely no person will be so rash as to conclude it arises from water in the chest. It frequently arises from causes which eventually produce this disease.

4. Aneurismal dilatations of the large vessels near the heart may not always admit of early detection, and they sometimes occasion many of the symptoms of hydrothorax before any effusion has as yet taken place. In general, however, a pain and throbbing in the seat and direction of some of the large arteries, never entirely ceasing, aggravated

by causes which accelerate the circulation of the blood, are experienced, and serve to distinguish it from this disease. As the aneurismal sac increases in size it sometimes leads to serous effusion in its vicinity.

Authors have endeavoured to point out the peculiar symptoms occasioned by polypi in the cavities of the heart, or mouths of the large vessels; but no reliance is to be placed on these, since they have been found when no such concretions existed; and have been absent when they were present. "Id quod dignoscitur," says Hoffman, speaking of these bodies, "ex summa compressione pectoris, pulsu intermittente, et inequali atque intercurrente, presertim post animi affectum, aut vehementiorem motum suffocationis metu. Interea non negandum est concurrentibus aliis causis verum hydropem accedere."*

5. In the cases of chlorosis which bear a resemblance to this disease there is more or less constant palpitation on the slightest motion, and in general dyspnœa, but, contrary to what happens in hydrothorax, these are invariably relieved, or subside in the recumbent posture. In chlorosis there is often a

* De Hydrope p. 442. Med. Rat. Syst. c. xiv.

cough, œdematous swellings of the face, legs, and sometimes of the whole body, scanty high coloured urine, and universal chilliness, but the sex, age of the patient, which with few exceptions is in females about puberty, or under twenty years of age, while hydrothorax more generally attacks males or females at a much more advanced period of life, unless from some previous violent acute affection; the peculiar sallowness or yellow colour of the face, without any livid hue, while the conjunctiva is remarkably white, serve as strong discriminating marks between them.

6. In polysarcia, owing to the quantity of fat surrounding the heart, and consequently interrupting its free action, many of the symptoms of this disease, especially difficult breathing, palpitation and the sudden starting up from sleep, sometimes occur. But if the urine suffer no preternatural diminution, and there be no external dropsical swelling or other sign of dropsy, the encreased bulk of the body will serve to point out the real cause of these symptoms. Polysarcia, if improperly treated or neglected generally ends in watery effusions in the chest.

CHAP. IV.

SECT. I.

Prognostics.

FROM the nature of the remote causes of this disease the prognosis must necessarily be often unfavorable. When it arises from aneurismal dilatations, or other tumours; from ossification of the valves or large vessels, from polypi, or from similar morbid alterations of structure of parts connected with or necessary to respiration and pulmonary circulation, all the aid our art can afford will be of little avail. The water may repeatedly be evacuated, and life be protracted, but all hope of a permanent cure will be at an end; and the prognosis will here depend on the probability of ascertaining the presence or absence of either of these organic affections. Independent, however, of such causes, hydrothorax has uniformly been regarded as a very formidable disease, for the most part leading to a fatal issue, and at best admitting but of casual and temporary allevia-

tion. From the difficulty which has been found of evacuating the serous fluid by the natural outlets, trepanning the sternum, or the *paracentesis thoracis*, has been almost universally recommended, both by the antients and moderns, as the only certain means of accomplishing this object, some have even gone so far as to recommend puncturing the pericardium.

That every species of dropsy is attended with more or less danger is a fact which will not be denied, since, under the most favorable circumstances, it evinces a high degree of local or general exhaustion. But that the cavities of the chest may speedily be unloaded of accumulated fluids by the natural outlets, their farther effusion often prevented, and the disease permanently cured, when none of these morbid states exist, without being compelled to resort to either of these operations, shall be shewn in the course of this work. It is necessary, therefore, to point out such circumstances as may lead to the detection of these local evils as guides in delivering our sentiments in regard to the probable issue of the disease.

A retrospective view of the cases which occured in the authors practice, and of the information which he has collected from other sources warrants him in stating the following particulars as data on which a tolerably correct judgment may be formed as to a fortunate or fatal result: and first, of those which portend a highly dangerous disease, and in general lead to a fatal issue.

1. Palpitations of the heart, steady and constant, appearing early, not subsiding on rest, or on the evacuation of the water, together with a pulse in every way corresponding.

2. Dyspnœa, or orthopnœa, continuing, with more or less violence, under similar circumstances, and threatening suffocation on attempting to lie down, or on any sudden motion.

3. Severe pains of the chest, especially about the seat of the heart, or in the direction of the large arterial trunks, and continuing with little or no intermission.

4. The disease suddenly supervening to pneumonia, or other acute inflammatory affections of the chest, particularly if these have

been neglected in the beginning, or if immoderate bleedings or drastic purgatives have been used in their advanced stages.

5. The disease coming on in constitutions previously exhausted by intemperance, especially by a constant career of tipling or dram-drinking; by the long continued operation of the depressing passions; in very advanced periods of life; or from extreme bodily weakness or exhaustion in any age.

6. Schirrous enlargements, or irregular knotty indurations of the liver, with confirmed jaundice.

7. Distortion or malformation of the chest.

Under these circumstances it behoves the practitioner to be extremely guarded in delivering his opinion; for although there may be little difficulty in evacuating the water, he will either have so formidable a disease of some important organ to contend with, or the constitutional stamina will be so far exhausted, as probably to preclude the possibility of permanent restoration under the most judicious treatment. Perfect recovery has, however, sometimes happened under these, and equally unpromising appearances;

while it must be confessed, the patient has unexpectedly been carried off when he appeared to be recovering.

When the disease commences its attacks under circumstances the reverse of those mentioned; when there is no reason to apprehend the presence of visceral affection of any magnitude; and when all the unpleasant symptoms gradually recede as the medicines begin to act upon the kidneys, we may venture to hold forth sanguine hopes of a happy issue, provided the treatment be directed by skill and judgment, and pursued with unremitting attention for a due length of time.

SECT. II.
Dissection.

It has been, and still continues to be, a favorite practice with some medical writers, to detail minutely the morbid phenomena of dead bodies; to exhibit them in the form of preparations in spirits, or expensive drawings on paper, without the history of the disease which gave rise to them, or of the remedies which had been used to prevent them. But if the object of morbid anatomy be to enable the medical

practitioner to detect the same disease whenever it shall again occur, so as to lead to successful practice. it must be obvious that no advantage can result from it, without these necessary accompaniments: for however minutely and accurately the diseased parts may be described, or ingeniously accounted for; or however neatly and elegantly injected or represented on paper, yet without the history of the symptoms of the disease which produced them, from their origin through the progressive stages and changes to the fatal termination, this important end cannot be attained. A series of dissections ably conducted on such a plan in diseases like that under consideration, whose early stages often pass over unnoticed, and which assume a serious aspect before their nature be suspected, would prove a valuable acquisition to the medical practitioner. The opportunities necessary to furnish materials for such an undertaking are numerous, and the men qualified for it, equally so. In any of the large hospitals in the kingdom, a very few years would afford a sufficient number of interesting cases for an octavo volume; and it is earnestly to be wished the respectable practitioners who have the superintendance of

these excellent institutions, would make their labors more subservient to public utility than has hitherto been done. In country practice the prejudices against the inspection of dead bodies are so strong as to furnish very few opportunities of this kind, a circumstance which the author has had frequent occasion to lament.

In the works of the excellent Morgagni, a considerable number of dissections of subjects who died of hydrothorax are collected from various authors, besides those which occurred to himself; but the previous history being extremely defective in many, and only those symptoms which immediately preceded death noticed in others; their value is thence materially lessened, a circumstance which is pathetically lamented by the author himself. For although the symptoms indicating the presence of water in the cavities of the chest be often tolerably well ascertained, yet those denoting the nature, seat, and extent, of the organic affections which occasion its effusion, are far from being clearly known. It is only by a sufficient number of facts thus collected, and faithfully recorded, this desirable object can be accomplished.

In judging of the nature of the disease

which was the cause of death, from the appearances in the dead body there is often great room for deception, especially if many days elapse before the body be opened. Various parts are discovered in a state of inflammation, ulceration, gangrene, or sphacelation, or smeared over with pus or inflammatory exudation, without erosion, to which the previous disease and death were attributed, whereas these states were probably only immediate or recent consequences of some other morbid condition of these organs. This applies more particularly to diseases of the stomach and upper part of the intestinal canal; even where there has been no disease the coats of the stomach have been found in a state of erosion after death, as illustrated by the late John Hunter. Hence the necessity of much discernment and sagacity in forming a correct judgment in such cases. The polypous concretions found in the cavities of the heart, or in the mouths of the large vessels, there is reason to suspect, have sometimes been of recent date, or were perhaps formed in *articulo mortis*. The degree of density of their texture, and the nature of their adhesions, will in ge-

neral determine whether they have been of recent or remote origin.

The most remarkable appearances observed on dissection are mentioned in the next chapter sect. ii among the causes of the disease; and will be found more particularly recorded in the Appendix No. 2. as selected from Morgagni and other authors, and in Cases 35 and 39, App. No. 1.

CHAP. V.

Causes in General.

SECT. I.

Predisponent causes.

THAT there are certain circumstances which predispose to watery effusions in the cavities of the chest more than into other parts of the body, the cases detailed in the appendix will serve to demonstrate.

1. Sex. Of eighty-one well marked cases which occurred in the authors practice, it will appear that forty-six were males and thirty-five were females; hence, as far as his experience goes, it must be inferred that the former are more liable to the disease than the latter: and on consulting medical writings the proportion of males will be found still greater: this is to be accounted for from men being more exposed to the exciting causes. Were female constitutions equally exposed to their influence it is probable they would suffer more readily than those of men, because from their greater

delicacy of frame, from the sedentary life they too generally lead, from their being "habitu corporis molli, spongioso, minusque firmis, instructo, magis prædiți," they are naturally more predisposed to it, to which the debilitating effects of frequent parturition and of profuse uterine hœmorrhages, they are liable to, contribute in a powerful degree. Men, however, have this great advantage, that the exercise they are using in the open air tends often for a great length of time to counteract the baneful operation of these causes.

2. Age. Though no age appears exempt from this disease, yet advanced periods of life are more particularly liable to its attacks in both sexes, insomuch that when it appears early, it is for the most part in consequence of some obvious powerful cause, concurring perhaps with some malformation of the chest, as may be seen in Appendix No. 1. Very fat corpulent children, who have been pampered with rich food without sufficient exercise, are not unfrequently carried off by serous fluids suddenly effused within the cavities of the chest, the consequence of pneumonic or catarrhal inflammation neglected or improperly treated, though the real cause has not

been suspected till after death. A few instances have fallen under my observation where the fact was ascertained on dissection, and others have occurred where there was every reason to apprehend death arose from the same cause, though there was no opportunity of inspecting the body afterwards. The face in such cases is generally pale, sallow, and bloated, sometimes swelled, and the head seems preternaturally large. The following case, however, furnishes a remarkable exception.

Miss P. Cotton, a young lady of a florid complexion, very fat at so early an age, and, of a lax fibre, æt 16; had for a few years experienced a sense of constriction about the heart as if something were closely embracing it, attended with difficulty in breathing and palpitation at times, especially on running or on going up stairs. From her healthy aspect, and her lively disposition these symptoms were disregarded, and even treated as imaginary by her relatives, so that little had been done for her relief. She died suddenly; on opening the chest the pericardium was found nearly filled with water.

3. Habit. Of all the circumstances which predispose to this species of dropsy, a short,

thick make, with a natural disposition to corpulency, especially if proper means have not been used to counteract it, is the most striking. This is fully exemplified in the Appendix No. 1. The proportion of cases in habits of this peculiar conformation is very considerable: it will be seen that it was so strong in some of these as not to have required the ordinary causes to produce the disease.

When the disease occurs in persons of a thin slender make, or in habits the reverse of those mentioned, which was the case in a few instances, it will be found to happen under the circumstances stated in 2. of this section.

I know of no particular occupations that dispose to this disease.

SECT. II.

Occasional causes.

It is a fact well known to physiologists and anatomists, that a subtile fluid is continually exuding from the capillary extremities of certain vessels termed, from their peculiar offices, *exhalants*, into all the cavities and interstices of the human body. If any of these cavities be opened immediately after death and exposed to the air, while the body is yet warm, this

fluid will be seen exhaling in the form of a white vapour, which led to the erroneous idea that it issued in this form from the vessels. The fluids thus secreted are intended to answer important purposes in the animal œconomy. By constantly moistening the surfaces of these cavities the various motions of the body are performed with facility; hence their quantity and quality vary according to the degree and frequency of these motions. But in order to obviate the inconveniences that must arise from the accumulation and stagnation of such fluids, another set of vessels, termed, from their offices also, *absorbents*, open by innumerable mouths into these cavities, take up and convey to the blood these fluids as soon as the purposes for which they were effused are answered.

Thus in health a constant deposition and absorption are going on, and a due equilibrium is preserved in every part by means of these vessels. It frequently happens, however, from various causes, that this balance is disturbed, and diseases of encreased or diminished exhalation or of absorption ensue. The disease termed dropsy may arise either from encreased exhalation, or from diminished absorption, or

from both; but there is reason to believe that defective action of the absorbents is the more frequent cause; but of this more in another place.

As however, these states are generally connected with, or arise from, some morbid condition of the solids, and sometimes also of the fluids, it is necessary to investigate the nature and cause of these conditions.

The most simple kind of dropsy is that which has for its cause such a relaxation of the solids, concurring probably with corresponding tenuity of the blood, that the thinner or serous parts of the blood are preternaturally exhaled from the capillary extremities of the arteries; and the same weakness pervading the absorbents, these vessels are incapable of taking it up in due proportion. Hence accumulation must be the consequence. That dropsy may, and does, occasionally arise from such causes alone admits of abundant proof. It has been affirmed by authors that dropsy might arise merely from a superabundance of water in the blood, without any other cause: and instances have been brought forward in support of this opinion. Schultzius produced a dropsy in a dog by causing him to drink

largely of water; but it is proper to observe that he first reduced his strength by bleeding him *ad deliquium;* a very important part of the experiment, on which, however, little stress is laid. An experiment of Dr. Musgrave is more to the purpose: he injected four ounces of water into the right cavity of the thorax of a dog; a difficulty of breathing, oppression and weakness immediately ensued. But these symptoms gradually diminished, and in the course of a week intirely vanished, the animal appearing in perfect health. The enormous quantity of sixteen ounces was injected into the left cavity of the chest of the same dog; nearly similar symptoms followed, with the addition of great heat and strong action of the heart; but these again disappeared in the course of a week. Had the vital energy been reduced by copious bleeding, as in the first experiment, it is probable the lymphatics would have been incapable of absorbing the water, and that the animal would have fallen into a dropsy.

It may therefore be taken for granted that a tenuity or watery state of the blood capable of producing a dropsy, is never a primary state, but always the consequence of laxity of the solids, and feeble action of the

heart and arteries; for in a healthy condition and vigorous action of these, the absorbents would dispose of the superfluous quantity as the experiments of Musgrave sufficiently prove. The causes more generally producing this state of the solids and fluids are, 1. Profuse hæmorrhages either from natural or artificial outlets.* 2. Frequent copious evacuations by means of drastic purgatives, especially if large quantities of watery drinks have been taken to repair the loss.† 3. Profuse sali-

* An instance of anasarca from the menstrual discharge continuing too long, is mentioned by Forestus, L. 19. obs. 35. By vomiting of blood, ib. 42. Two cases from frequent and long bleeding at the nose by Schenk, obs. L. 3. obs. 9. De hydrope. Two cases from frequent blood-letting, Miscell. Curios. Acad. Nat. Ian. 2. obs. 163. Also from abortion in the third month by Hoffman, chap. xix. De hydrope. Similar instances constantly occur and may be found in all the writers on dropsy. See Monro's excellent treatise on dropsy, *passim.*

† Dr. Fothergill mentions an instance of a person who fell into an incurable dropsy from drinking twelve pints of barley water daily for a month, when he was only desired to drink plentifully, in order to remove his fever. Morgagni, obs. 43. gives a remarkable case of a nun of Bologna, who, for a defluxion upon her gums, was prescribed a *syrupus aureus* by a physician: it occasioned fifty motions; these were attended with intolerable thirst, which large quantities of broth did not allay. Vide Appendix, No. 2. Case 28. where this interesting case is detailed at full length. Vide also Sylvius Tractat. de Morb. Epidem.

A young woman, a wet nurse, in order to encrease her milk, drank night and day immoderately of beer, sometimes by itself, sometimes mixed with milk, in consequence of which she contracted an ascites. Willis Ph. Rab. part 2. c. 3. sect. 3.

vation*. 4. A low watery diet, yielding but little, or a depraved nutriment; or a crude indigestible, unwholesome, aliment. 5. Cold, low, damp situations, especially if the diet be such as has been mentioned†. 6. The use of bad or stagnant waters, or the abuse of mineral waters. 7. The long continued operation of the depressing passions. 8. A sedentary life, especially if preceded by the reverse, and if accompanied with intense study or application of the mind. 9. A weak digestion, and imperfect assimilation of the food. 10. Large draughts of cold water, or new small beer of a bad quality, when the body was heated, of which many instances have fallen within the authors observation: various other causes, which, either by their violence, or long continuance, exhaust the vital powers, might be enumerated.

Effusions thus arising, will first shew themselves in parts which have been previously weakened by disease, or other causes. Hence

* "Oritur interdum," says Hoffman, "post perperam institutam salivationem hydropica labes." De hydrope vol. 7. p. 456.

† The inhabitants of many parts of Holland and other low fenny countries, are said, on the authority of various writers, to be more subject to dropsy than those who breathe the salutary dry air of more elevated situations. Bontius.

hydrothorax may appear in this manner either as a symptom of general dropsy, or as a primary affection. But since it will be found to have causes and circumstances peculiar to itself, which destroy more particularly the equilibrium of the exhalant and absorbent vessels within the cavities of the chest, these shall next be considered.

All causes interrupting the free circulation of the blood through the pulmonary artery or great aorta, or altering its distribution through the body, so that larger quantities may be accumulated in, or determined to the chest, and with greater velocity than to other organs; while its return to the veins is impeded, or such as by altering the organization of the lymphatics, or in any way impairing their functions, prevent or impede the absorption of the natural fluids effused, are the most frequent agents concerned in its production: of this description are, polypi, aneurismal or other tumours, pressing either upon the large blood vessels, or lymphatic trunks; infarctions of the lungs; obesity, especially when large quantities of fat surround the heart, or when collections of viscid mucus are lodged at the same time in the bronchial vessels; ossification of the semi-

lunar valves, of the coronary vessels, or fibres of the heart itself, or of the coats of the large adjacent vessels; morbid relaxation, or dilatation of the heart; paralysis of the lymphatics, adhesions of their sides, and consequent obliteration of their cavities, so as to become impenetrable to injections; rupture of the thoracic duct, or of a principal lymphatic trunk; enlargements and indurations of the liver;* violent blows on the chest; frequent or severe attacks of pneumonic inflammation, especially if they have been neglected, improperly treated, terminate slowly or imperfectly in resolution, without expectoration, or if to avert the urgency of present danger, copious bleeding has been resorted to;† frequent attacks of asthma, or catarrh; acute fevers terminating by congestions in the thoracic viscera. Though the

* Vide Morgagni letter 17, obs. 6, 10, 17, 21, 23, 25. letter 18, obs. 6, 8, wherein instances of morbid dilatations of the heart and large vessels causing this disease are mentioned. Vide also Appendix No 2. where the particular symptoms and dissections are detailed.

† Vide Case 22, App. No. 1. In the case here referred to, the attacks of pneumonia were frequent, and the symptoms so extremely urgent that the most profuse bleedings and other evacuations were absolutely necessary to save the life of the patient. While sanctioning this practice, I more than once observed to the surgeon that hydrothorax would be the consequence. But the practitioner is often reduced to the alternative of incurring the hazard of remote evil to obviate present danger. Also Morgagni, letter xvi, art. 12.

the abuse of intoxicating liquors in general, can scarcely be said to produce dropsy of the chest more than any other, yet there are certain kinds which in particular constitutions possess this power in a remarkable degree; namely porter, ale and beer. But as this circumstance does not appear to have been observed by others the subject shall be considered in a seperate section.

SECT. III.

Of the use and abuse of malt liquors as a cause of hydrothorax.

That by far the greater number of cases of this disease which occurred in my practice, especially among males, had their origin in the free indulgence in porter and ale, is an undoubted fact. Besides their effects, when taken to excess, in undermining the constitution in common with other strong intoxicating liquors, they possess properties which may be said to be peculiar to themselves, and which, although operating more imperceptibly, are yet no less dangerous in their ultimate consequences. It is an observation familiar to every one, that great ale or porter drinkers are

very fat and corpulent: so great a disposition to obesity do these rich liquors produce in certain constitutious, that the most athletic occupations are sometimes insufficient to counteract this tendency. But it invariably happens that their peculiar effects on the body are unfriendly to exertion. They furnish lax, soft, flabby solids, that are not readily acted upon by the ordinary stimuli, and a dark, rich, th ck, blood, that seems to possess comparatively little stimulant properties. Hence instead of being endowed with strength and energy proportioned to their encreased bulk, such persons are heavy, inactive, and unequal to athletic exertions. A torpor pervades the mental as well as the bodily functions. The complexion is either of a sallow, dark red, or livid hue. They sleep much at night and are lethargic in the day. If they be seized with violent inflammation they have comparatively much less acute suffering: if it be of any of the thoracic viscera, the breathing will be extremely difficult and laborious, but the pain in general of the dull obtuse kind, yet on that account not the less dangerous, because it does so readily give alarm. If blood be drawn, beside the peculiarities mentioned, it will have,

on cooling, a large proportion of crassamentum, very dark at the bottom; the buff on the surface will not be firm or dense, nor assume the cup-like form of blood drawn from the athletic muscular water drinker, under similar circumstances, but soft, flabby, sometimes of a livid hue, and scarcely receding from the sides of the vessel. The appearances of the blood in such cases I have often observed with attention, and have repeatedly foretold them to the surgeon before the vein was opened.

Whether they be owing to the imperfect oxygenation of the blood consequent upon impeded respiration, to the weak action of the heart and blood vessels, and general relaxed state of the solids, or to certain properties imparted by these liquors is immaterial to the present subject; it is probable all these causes cooperate.

As the bulk of the body, especially the quantity of fat, encreases, the functions of those organs most essential to life are impeded. The heart, lungs, and muscles subservient to respiration, being overwhelmed with fat, respiration and pulmonary circulation become more or less interrupted, and the venous blood

accumulates in the right side of the heart, and in the head. This is more distinctly observed on any sudden exertion, or during a fit of coughing, when the breathing is very sensibly affected; and the face often becomes suffused with a dark red or livid blood.

The dark coloured thick blood thus generated being less stimulant than thin, florid, sufficiently oxygenatated blood, may naturally be supposed to circulate with less freedom through the capillary extremities of the vessels, and acting at the same time on a dull, sluggish, or comparatively less susceptible fibre, general torpor must be the consequence. The effects of this are seen in a striking degree in the secretory and excretory organs, more especially in the lungs, large quantities of viscid phlegm being often secreted and accumulated in the bronchial vessels, so as in many instances to produce habitual cough, with copious expectoration, and corresponding dyspnœa.

In this state of corpulency, which has been termed a dropsy of fat by some writers, and which frequently leads to general dropsy, as well as hydrothorax, the body may be said to be in a state of constant predisposition to disease, insomuch that severe colds, catarrhs, or pneumo-

nic inflammation, are occasioned by causes which in a more natural and healthy condition would be productive of little inconvenience, and are with difficulty subdued. It will be seen that some of the subjects of the annexed cases, after struggling with a cough or cold during the winter months which might have been easily removed, had they conformed to the necessary restrictions, applied to me the following spring or summer labouring under hydrothorax.

Fatal instances of apoplexy, or hœmoptoe, from rupture of vessels, are not uncommon from such causes; and I have frequently known a temporary suspension of the sensorial functions amounting to apoplexy, merely from the accumulation of venous blood in the head, and consequent pressure upon the brain, during a fit of coughing.

Mr. C. one of the subjects of the annexed cases has had several such attacks, in one of which I lately saw him. He fell from off his chair totally insensible, his face and neck being suffused with dark blood. Not aware that he had been subject to them, I remarked to a gentleman who was in the room, that all was over with him: he however soon recovered,

and by a proper course of medicine and regimen, has remained free from these alarming attacks, and his cough is much relieved. He had a confirmed hydrothorax about six years before.

In short, there is so little room for the ordinary circulation through the lungs under such circumstances, that whatever occasions an extraordinary determination thither, or impedes its passage, is productive of more or less inconvenience.

SECT. IV.

Pathology; Proximate cause; some of the more remarkable symptoms explained; Dr. Darwin's theory of retrograde action of the absorbents examined.

It has already been observed, that the immediate cause of dropsy was generally allowed to be an encreased exhalation, or diminished absorption, or both, of the natural fluids secreted in cavities, arising from some defect in the vessels concerned in performing these functions. But although the fact itself be admitted, medical men of high character are divided as to the precise nature of the morbid condition of these vessels. Dr. Darwin in particular has

stepped out of the common path to explain these, and some of the other principal phenomena of dropsy. After giving a general view of the absorbent system, vol. 1. sect. xxix. 1. p. 302, et seq; he thus proceeds to urge his objections to the generally received opinion, and to advance his own, vol. ii. p. 305.

1. "The many valves which occur in the progress of the lymphatic and lacteal vessels, would seem insuperable obstacles to the regurgitation of their contents. But as these valves are placed in vessels, which are endued with life, and are themselves endued with life also; and are very irritable into those natural motions which absorb, or propel the fluids they contain; it is possible in some diseases, where these valves or vessels are stimulated into unnatural exertions, or are become paralytic, that during the diastole of the part of the vessel to which the valve is attached, the valve may not so completely close, as to prevent the relapse of the lymph or chyle. This is rendered more probable, by the experiments of injecting mercury, or water, or suet, or by blowing air down these vessels; all which pass the valves very easily, contrary to the natural

course of their fluids, when the vessels are thus a little forcibly dilated, as mentioned by Dr. Haller." (Elem. Phys. T. iii. s. 4.) ibid.

To this it may be objected that as no proof has been given of the return of these fluids, it seems far more probable that they would be urged forward in the natural direction, with additional force, on these vessels being stimulated into unnatural exertions; and if their elasticity were not impaired or destroyed by being "a little forcibly dilated," that the valves would prove insuperable barriers to their return.

2. "The mouths of the lymphatics seem to admit water to pass through them after death, the inverted way, easier than the natural one; since an inverted bladder readily lets out the water with which it is filled; whence it may be inferred that there is no obstacle at the mouths of these vessels to prevent the regurgitation of their contained fluids." Ib. p. 306.

Before any weight was attached to this experiment, absolute proof should have been given that the water passed through the channel of the lymphatics; and this done, that there were valves between the external surface (before inversion) and internal cavity of the bladder:

For 1. the valves which take up fluids from its cavity do not, it is presumed, open and dispose of their contents, upon its external surface, but follow the course of its peritoneal covering, and depart from it where this membrane is reflected over it at the os pubis and rectum, and convey their fluids, in common with the other abdominal lymphatics to the thoracic duct. Hence it will be found, if the ureters only be divided, and the bladder inverted before separation, that no fluid will pass in the direction mentioned. 2. If any have their origin on its external surface and open into its cavities, then the water on inversion will pass in the natural channel. 3. As no communication has, as far as I know, been demonstrated between its internal and external surface, the only part through which any fluid can gain admittance will be about its neck, at the place where it has been separated from its adhesions. And as arteries and veins are placed there also, which must necessarily be divided or lacerated, is it not more probable that the water passed through them? is it not the only channel through which it could pass? it being well known that fluids are poured into the cavity

of the bladder by the exhalent vessels, as well as absorbed from it.

3. "In some diseases, as in diabetes and scrophula, it is probable the valves themselves are diseased, and are thence incapable of preventing the return of the fluids they should support, thus the valve of the aorta, &c." ib.

In diabetes there is every evidence of a vigorous action of the absorbent system; indeed a preternatural action of these vessels, and determination of blood to the kidneys, seem to form a principal part of the disease, from the rapidity with which the enormous quantity of nutriment usually taken in this disease is absorbed by the lacteals, and from the emaciation which generally attends it.

4. 5. 6. 7. 8. "There are other valves in other parts of the body analogous to those of the absorbent system, and which are liable, when diseased, to regurgitate their contents; thus the upper and lower orifices of the stomach, &c. &c." ib. p. 306. et seq.

The analogy used here is far fetched and inadmissible; when the valves of the lymphatics are ossified or diseased, so as to be incapable of performing their natural functions, it is not denied that their contained fluids may

regurgitate, as the blood does into the heart, when those of the aorta are affected in a similar manner. But to judge correctly of the real manner in which they are affected in dropsy, we should take examples of this disease unaccompanied with any organic affection. We shall then find that their functions will be restored, sometimes permanently, and the water evacuated from cavities in the course of forty-eight hours, by the aid of certain substances hereafter to be mentioned. Hence the analogy of what occurs in other organs and vessels, whose structure is very different, is vague and inconclusive, since the absorbent system itself furnishes abundant opportunities of making experiments both in the living and dead subject.

"Many medical philosophers, both antient and modern, have suspected that there was a nearer communication between the stomach and the urinary bladder, than that of the circulation; they were led into this opinion from the great expedition with which cold water, when drank to excess, passes off by the bladder; and from the similarity of the urine, when produced in this hasty manner, with the material that was drank, &c." sect. ib. iii p. 308.

The rapidity with which the bladder is some-

times filled with clear limpid urine on drinking largely of cold diluting drinks, such as weak punch, especially if the body be exposed to a cold humid atmosphere, is generally known. But is it not more natural to account for this through the regular course of the circulation, than through a channel which the imagination of Dr. Darwin seems to have created, and of which no traces can be discovered by the ablest anatomists. As to the urine being "similar to the material that was drank," there is room for fallacy. It is well known that according to the quality of the substances used for drink and food the urine will acquire a particular odour, but still there is no reason to infer that its constituent parts are materially changed, but only their relative proportions. Unless then the urine mentioned in these experiments had been found on chemical analysis to possess peculiar properties, and that these substances were actually found to be returned unchanged, the evidence of the senses is not otherwise to be trusted. Wine, or wine and sugar, or emulsions, if returned by urine, unchanged, as mentioned by the author, on the authority of Etmuller, might very easily have been detected.

In certain diseases not only the constituent ingredients, and properties of the urine, but of the whole mass of blood may be so altered as even to appear incompatible with the functions of life. As an example of this, I have the authority of my learned and ingenious friend Dr. Macqueen, late of London, to insert the following extraordinary case, which was copied from his journal "as it was taken down at the time it occurred."

"In the autumn of the year 1788 a young woman about 20 years of age, was brought to me by her mother. The girl looked of a full habit and healthy, though her mother said she was of a weak constitution. About a week before she fell suddenly from a stool, on which she stood to reach something above her, and was instantly seized with a fit, probably of the hysteric kind. Ever since that fit her urine had been either white, like almond emulsion, or pale like pure water; but whether milky or pale, it always contained a third part of a strong rancid oil, which swam on the top. I have seen a pint vial full of both sorts, the white and the pale, each containing a third part of oil. About three days after, being seized with a violent pain in the side, I directed

that she should lose a few ounces of blood from the arm. This blood was brought to me in a bason the following morning: it was apparently one half oil, of the same smell and quality with that in the urine. I was informed that as soon as it began to issue from the vein, the room smelled as if lamp oil had been poured out. The blood gave a pale red as it touched the sides of the bason; but the whole appeared a dirty, turbid, oily mixture. As the bason laid in my room none of the professional men who came in could determine what it was. The young woman recovered her usual health in the course of three weeks, by the aid of bark, acids, and a tonic regimen. After she appeared well I had two ounces of blood taken from her arm, by way of experiment, which exhibited a natural appearance."

"Dr. Kratzenstein," continues the author of zoonomia, "put ligatures on the ureters of a dog, and then emptied the bladder by a catheter; yet in a little time the dog drank greedily, and made a quantity of water. (Disput. Morbor. Haller. T. iv. p. 63.) A similar experiment is related in the philosophical transactions, with the same event, No. 65, 67, for 1670.") In this experiment too, there is

ample room for deception. It is not easily performed with accuracy, and one or two are not sufficient to justify a general conclusion. Let it be fairly made and repeated, and the nature of the fluid found in the bladder ascertained, before any weight be attached to it.

Nor do the instances of urine continuing to pass, after the suppuration or total destruction of the kidneys, referred to in Haller (Elem. Phys. T. viii. p. 379.) which are next mentioned, appear to favor the authors hypothesis. If any fluid really continued to pass into the bladder after the total destruction of the kidneys, it must necessarily be by some other channel than the ureters; and this no anatomist of the present day will be hardy enough to deny. But if this fluid should really be urine, as the author contends, it necessarily follows that the lymphatics, beside conveying fluids in a retrograde course to the bladder, must also assume the specific office and function of the kidneys, by converting their contents into the same nature with the fluid secreted by these organs, a circumstance on which the author does not seem to have reckoned.

There is however, little room to doubt that

the fluid found in the bladder was urine, and that it came from no other source than the kidneys, and no other channel than the ureters; for although the kidneys may have been found *totally* destroyed by suppuration on dissection, in the *dead* body, yet they might have been capable of secreting some urine a few hours, (a few minutes would have been sufficient,) before death. Every person conversant with morbid anatomy is aware of the great difference in the appearance of the diseased organs, when inspected immediately after dissolution, or when this has been delayed some days, especially in cases of suppuration from previous inflammation, in which the parts pass so quickly through the laws of inorganic animal matter. The inference deduced from these cases, therefore, seems to rest on no better foundation: they are besides extremely rare. The experiment of the nitre and asparagus, on which much stress is laid, is next mentioned.

"A friend of mine, (June 14, 1772,) on drinking repeatedly of cold small punch, till he began to be intoxicated, made a quantity of colourless urine. He then drank two drams of nitre dissolved in some of the punch,

and eat about twenty stalks of boiled asparagus; on continuing to drink more of the punch, the next urine he made was quite clear, and without smell; but in a little time another quantity was made, which was not quite so colourless, and had a strong smell of the asparagus; he then lost about four ounces of blood from the arm.

The smell of the asparagus was not at all perceptible in the blood, neither when fresh taken, nor next morning, as myself and two others accurately attended to; yet this smell was strongly perceived in the urine, which was made just before the blood was taken from his arm."

Some bibulous paper, moistened in the serum of this blood, and suffered to dry, shewed no signs of nitre by its burning. But some of the same paper, moistened in the urine, and dried, on being ignited, evidently shewed the presence of nitre. This blood and the urine stood some days exposed to the sun in the open air, till they were evaporated to about a fourth of their original quantity and began to stink: the paper which was then moistened with the concentrated urine, shewed

the presence of much nitre by its manner of burning; whilst that moistened by the blood shewed no such appearances at all."

"Hence it appears that certain fluids at the beginning of intoxication, find another passage to the bladder besides the long course of the arterial circulation; and as the intestinal absorbents are joined with the urinary lymphatics by frequent anastamoses, as Hewson has demonstrated; and as there is no other road, we may justly conclude, that these fluids pass into the bladder by the urinary branch of the lymphatics, which has its motions inverted during the diseased state of the animal." p. 319. et seq.

If I mistake not the authors meaning in detailing this curious experiment, he infers, that the whole of the nitre and asparagus which reached the bladder was conveyed thither "by the urinary branch of the lymphatics," and consequently that no part of either entered the circulating mass, as the blood when drawn, and afterwards the serum, by the tests used, afforded no evidence of the presence of nitre or asparagus. It should have been stated whether or not he imagined the whole of the fluid found in the bladder entered it by the

urinary branch, or partly by this, and partly by the kidneys? but in which ever point of view the question be examined, the solution, according to his hypothesis, will be found equally difficult: if by the former, all the numberless mouths of the lacteals and lymphatics which open into the stomach and intestines, except those which anastamose with the urinary branch, must have remained in a passive or quiescent state, till the latter "drank up," and disposed of the punch, asparagus, and nitre which were swallowed: if he supposed it was partly by both, those rumifying with the urinary branch must, by a wonderful instinct, have selected the whole of the two last substances, together with a portion of the punch with which they were blended, leaving only the water, acid, sugar, and spirit, or at least a part of them, for the other absorbents to be conveyed to the blood, and from thence, to the kidneys. What a wonderful accommodation in these vessels! and for what purpose?

If the experiment on farther accurate trials, should prove to be as here stated, it seems to admit of a satisfactory explanation without going out of the regular path, which has been

so repeatedly explored by the ablest anatomists. The powerfully diuretic effects of large quantities of cold punch in the circumstances mentioned, and on an empty stomach, are well known. These will be considerably encreased by the enormous dose of two drams of nitre, especially when largely diluted. As soon as they enter the stomach and *primæ viæ*, they will be quickly taken up by the thousands of mouths of the absorbents which open into these cavities, and to which they will prove a powerful stimulus, and as quickly conveyed through them to the blood, and from thence to the secretory ramifications of the arteries. As soon as the blood thus charged with these substances has reached the kidneys, the determination to these organs, will be still farther encreased by the specific stimulus they will exert upon them. Hence the nitre and the substances in union with it, will of course pass with unusual rapidity through the circulating mass, and the quantity of this salt which may be mixed with the blood, will bear so small a proportion with, and be so largely diluted by, the whole mass of the vital fluid, as readily to elude detection without more accurate tests than those used. With regard to the aspara-

gus, it has not been proved that the peculiar odour imparted to the urine is communicated to the blood also; it is probable that this depends upon the combinations it meets with in the urine, and does not arise till it has passed through the kidneys.

"A gentleman," continues the author, "who had been some weeks affected with jaundice, and whose urine was in consequence of a very deep yellow, took some cold small punch, in which was dissolved about a dram of nitre; he then took repeated draughts of the punch, and kept himself in a cool room, till on the approach of slight intoxication he made a large quantity; this water had a slight yellow tinge, as might be expected from a small admixture of bile secreted from the kidneys; but if the whole of it had passed through the sanguiferous vessels, which were now replete with bile, (his whole skin being as yellow as gold) would not this urine also, as well as that he had made for weeks before have been of a deep yellow? paper dipped in this urine, and dried, and ignited, shewed evident marks of the presence of nitre." ib. p. 310. et seq.

If a large quantity of any thin diluting drink be suddenly drank and carried to the circula-

tion, and the quantity of urine be thence very considerably encreased, if before of a high, or jaundice colour, will it not now become less so in proportion to the quantity of watery fluid which entered the blood, and of the urine secreted? this is surely so self evident as scarcely to require a serious refutation. It may be observed in health, in dropsy when the urine is of a very high, or yellow colour, and in jaundice; and if the biliary obstruction be not removed it will assume its original colour when the blood ceases to receive the redundant water, and the urine is lessened in quantity.

It is unfortunate for the author's theory that in this experiment the urine had "a slight yellow tinge," as it undoubtedly proves that the whole of the nitre did not pass through the new channel, but that some at least, entered the blood and passed with the bile which imparted the yellow tinge. Is not this too a tacit acquiescence in what was denied in the last experiment? namely, that any portion of it had reached the blood.

The celebrated author next proceeds to explain the theory and phenomena of diabetes, diarrhæa, and various other diseases on the re-

trograde action of the lymphatics, through which it is not necessary to follow him, presuming, if the objections already offered, to which many more might be added, that the whole of this subtle theory must fall to the ground.

That the functions of the absorbent system of vessels are variously affected in different cases of dropsy, seems very probable, since they are restored and the disease is cured, by medicines possessing apparently different, and even opposite effects; and since diuretic remedies of one class succeed immediately after those of another have failed, as well as from the great uncertainty of any individual medicine hitherto used in this disease.

On a review and analysis of the theory of retrograde action of the absorbents, it appears that he only connects this retrograde motion with a diseased state of these vessels; and in order to preserve consistency, he is obliged to reduce the healthy subjects of his experiments to "beginning intoxication." which he calls a diseased state, before this unnatural action commences. But is he aware that many strong healthy persons may be found who are incapable of being intoxicated by weak small

punch, but who experience its diuretic effects in a very considerable degree; he may however contend that they are in a diseased state because they labour under temporary diabetes.

On the whole then, from the foregoing observations, the following conclusions may, I think, be drawn.

1. That no proof has been given, by experiment, or by rational induction, of a retrograde action of the absorbents, or of a corresponding motion of their contained fluids.

2. That the evidence adduced in support of this opinion is founded in vague and inconclusive hypothesis.

3. That the experiments made both on the living and dead body militate against it.

4. That if the absorbents be capable of taking up fluids and urging them forward, their valves will oppose insuperable obstacles to their return.

5. That no more direct channel has yet been discovered from the stomach and intestines, than that of the circulation.

6. Consequently that the proximate cause of dropsy cannot be a retrograde action of the lymphatics, but that which has been mentioned in the beginning of this section.

In some instances of dropsy the watery accumulation is extremely rapid; in others it is very slow. In the first instance this may be accounted for by a total, in the second, by a partial suspension of the action of the absorbents, even without taking into the account encreased exhalation, which it is probable may concur in many cases. In those instances where the disease is very rapid in its progress the thirst is generally intense, and great quantities of liquids are suddenly drank, while very little water passes off by the kidneys.

Dr. Darwin's explanation of the state of the urinary secretion in dropsy seems still more singular.

1. "Diminished urine, which is high coloured, and deposits an earthy sediment when cold, is owing," says he, "to the great action of the urinary absorbents. In some instances the cutaneous absorbents are paralytic, as well as those opening into the cellular membrane; and hence no moisture being acquired from the atmosphere, or from the cellular membrane, great thirst is excited, and great absorption from all other parts where the absorbents are still capable of action. Hence the urine is small in quantity, and of a deep colour, with

copious sediment; and the kidneys are erroneously blamed for not doing their office; stimulant diuretic medicines are given in vain, and very frequently the unhappy patient is restrained from quenching his thirst, and dies a martyr to false theory." vol. ii. p. 39. et seq.

Here we perceive, according to this hypothesis, the synchronous existence of preternatural action of the urinary absorbents; paralysis of the cutaneous, and of those opening into the cellular substance, while some are performing a retrograde movement, and another set their natural action! To reconcile so extraordinary a deviation from the regular course of nature, with the known and established laws of the animal œconomy, seems difficult, if not impossible. That in many diseases certain parts or organs labour under debility or perform their functions irregularly or imperfectly, while others perform them with additional vigour seems very evident; but in no instance can such singular deviations as those supposed to occur in dropsy be discovered. Something like proof seems at least necessary before assent can be given to an hypothesis so novel, however high the authority which sanctions it, more especially when these

phenomena may be accounted for agreeably to the known laws of lymphatic absorption and circulation.

Paralysis of the absorbents has been mentioned as an occasional cause of dropsy; but it is probable that it very rarely occurs, and when it does, that like paralysis of the muscular fibre, it will be either incurable, or admit only of partial relief; and that it exists in those dropsies which are beyond the reach of medicine. If it occurred in every case of dropsy would it be removed so speedily as is frequently found to be the case? by the use of digitalis alone, or in combination with other diuretics, the cavities of the body are sometimes unloaded of very large quantities of water in the course of twenty-four hours; the urine is proportionably encreased in quantity, becomes paler, sometimes limpid, though before it was of a deep red or jaundice colour. Here too, if this were the fact, while the cutaneous absorbents, and those opening into cavities, recovered their lost action, that of the urinary absorbents must be impaired, for the urine now ceases to be high coloured, or to deposit an earthy sediment. The cause of the scanty high coloured urine, with a peculiar

sediment, must therefore be sought for from a different source, than "great action of the urinary absorbents," and the enquiry will be found in a practical point of view important.

"That the kidneys are often erroneously blamed for not doing their duty; that stimulant diuretics are given in vain; that the unhappy patient is frequently restrained from quenching his thirst; and dies a martyr to false theory," is too true. But what will be the consequence if the practitioner act under the influence of this theory? if he trust "to diluent drinks, and warm bathing, the natural cure" affirms the doctor "of this symptom?" or if he consider as incurable every case of dropsy where the urine is thus affected?

The urinary secretion seems liable to a greater variety of changes not only in this disease, but in many others, even in health, than any of the other fluids of the body, the perspiration not excepted.

It is influenced by the quantity and quality of the food and drink; by exercise, and indeed by every remarkable change which the body undergoes, so as to vary frequently in twenty four hours in the same person.

It is sometimes small in quantity, high co-

loured, and on cooling lets fall a sediment; while at others it is encreased in quantity, is of a straw colour, pale, or transparent without any deposition: when in fevers and other disorders it has been without any, the sudden appearance of a copious whitish or branny sediment, generally indicates the approach of a favorable change.

The peculiar appearance the urine frequently exhibits in dropsy may be principally attributed. 1. To diminished determination of blood and serous fluids to the kidneys, concurring sometimes with a torpor, weak action, or inactivity of these organs, more especially of the capillary extremities of the emulgent artery. 2. To the introduction of vitiated bile into the circulating mass.

1. In proportion as the blood is deprived of its more aqueous parts by sweating, by salivation, by purging, or by these fluids being copiously effused into cavities, as happens in dropsy, the determination to other parts, agreeably to a law of the animal œconomy, will be diminished. In dropsy too the fluids effused, generally consist of the inert watery parts of the blood, holding in solution a portion of the coagulable lymph, except when the

disease is the immediate consequence of inflammation. As the blood going to the various secreting organs will therefore contain less water, but more of the saline, earthy, and other constituent parts, so the fluids secreted from it will be less in quantity, more dense, glutinous, and exalted in their nature. Hence apparently, the cause of the scanty high coloured urine, the dryness and clamminess of the fauces, the thirst, and the diminished perspiration in dropsy. And it may reasonably be inferred that the biliary, pancreatic, and indeed all the other secretions, will be equally influenced. With respect to the bile we have the strongest evidence of this.

That "great action of the urinary absorbents" has no share in the production of this change may further be proved by examining the urine as soon as it has entered the bladder, before it has been exposed to the action of these vessels. If after completely emptying the bladder, the patient be again desired to void urine, it will assume the same appearances though no more than a tea spoonful, or even a few drops be passed: this I have repeatedly observed. If suffered to remain a considerable time in the bladder, its thinner

parts will be taken up by the absorbents in dropsy as well as in health; and what remains will become higher coloured and thicker; but that the diminution in quantity, and high colour, are to be sought for from defective secretion in the kidneys owing to the causes mentioned, and others about to be pointed out, admits of abundant proof.

Many of the remote causes of dropsy, it is well known, act immediately on these organs by stimulating them at first to excess; but agreeably to a general law of excessive stimulation, their repeated application will at length be succeeded by languor and inactivity. Hence defective secretion, which will be a general consequence, may occur early, or even precede the serous effusion, as has been observed in the history, as well as succeed it. It frequently happens, however, that there is no defect whatsoever of the kidneys in the early stages of dropsy, and that this symptom is to be attributed to the causes already pointed out, as well as to the introduction of vitiated bile into the blood.

The great influence of the biliary secretion in the production of dropsy seems not to be sufficiently understood, or attended to, by

modern practitioners. In this respect the antient physicians seemed to have had the advantage. Though totally ignorant of the real uses and functions of the liver, they were fully aware of its extensive agency in producing dropsy. They supposed this viscus to be the *elabaratory*, as they termed it, of the blood, and dropsy to arise "from a cold temperament, proceeding from a chronic obstruction of its vessels, by which sanguification was vitiated, and the chyle which was brought," as they imagined, "by the meseraic or mesenteric veins, instead of being converted into blood, was changed into that serous fluid found in cavities in dropsy."

That a vitiated state of the blood is the necessary consequence of a long continued obstruction of the hepatic vessels and billiary ducts, especially of the bile which finds its way into the circulation be morbidly changed in its properties, as is frequently the case, is a fact too well established to be doubted; and which the antient physicians knew from experience, however crude their notions of the œconomy of this organ might have been.

It is however generally supposed that the liver is concerned in producing dropsy only

in so far as it prevents, by its encreased bulk, and consequent pressure, the free return of the blood of the vena portarum and inferior caver, to the heart. But this is neither the only nor the principal way in which it disposes to this disease: its influence is often exerted earlier, and is far more extensive than is generally imagined.

When the function of the liver is so far impaired by whatever cause, that undue quantities of bile are conveyed to the blood, the urinary secretion and lymphatic absorption, appear always to be more or less diminished, and there is a corresponding tendency to dropsy; insomuch that if there be a general predisposition to the disease it will frequently take place long before any schirrous induration, or other enlargement, sufficient in size or degree to impede the return of the venous blood, shall have yet occurred. Though healthy bile be an active stimulus to the bowels, yet when diverted from its natural channel and mixed with the blood it proves the reverse to other organs.

In jaundice a general torpor and languor pervade the bodily and mental faculties; and if in consequence of previous morbid action

of the liver the bile should be vitiated in its properties these effects will be still more remarkable. Hence any material derangement of this organ, especially if accompanied with a languid action of its vessels and absorption of bile, and be produced by the common causes of dropsy, will be succeeded by a corresponding inactivity of the kidneys and absorbent vessels; and if these causes be not removed, and a proper plan of medicine and regimen submitted to, either chronic inflammation, schirrus enlargement of the liver or dropsy, or both, will be the consequence. As this state, when it precedes or accompanies the disease under consideration, ought to influence the practice, it is proper to observe that it may be generally known by the sallow, bloated, or bilious aspect of the countenance, by the high or saffron coloured scanty urine, with corresponding sediment, and by the ordinary symptoms of torpor and inactivity of the liver, which usually attend it.

The circumstances which determine the spontaneous separation of the urine appear not to be sufficiently understood. In health, though the urine be small in quantity and high coloured, in consequence of abstinence from

liquids, or of profuse sweating from exercise, there is seldom any tendency to separation; nor does this readily take place in the early stages of inflammatory disorders, even though bile be largely taken up and mixed with the blood, as long as the action of the heart and arteries continues vigorous; but no sooner is the strength considerably reduced, or exhausted, as happens in the advanced and last stages of these diseases, in hectic, and the crises of other fevers, in jaundice and dropsy, than this separation generally takes place.

CHAP. VI.

CURE.

SECT. I.

General observations on the cure.

THOUGH much interesting information may be collected on the history of the disease from the works so often referred to and quoted, yet it is to be lamented that little is to be found of any value, or worthy of being recorded, on the most important part, the cure. The disease seems uniformly to have been regarded, both by the moderns as well as by the antients as incurable, admitting, under the most favorable circumstances, but of casual and temporary relief from medicine. Under this impression no progress appears to have been made towards a more successful mode of treatment. In the only fortunate case of hydrothorax related in the works of Morgagni it is inferred that it was a different disease because it terminated in recovery. Several successful cases are mentioned in modern writings, especially in Witherings excellent essay; but in

many of these the disease afterwards returned. Similar instances may be found in detached works, or in periodical publications; but since the subsequent history has seldom been traced beyond the short period of a few weeks or months, it is highly probable the cure was of short duration; and as these cases are too often published with the view of answering a particular object, second editions were not to be expected.

It has already been observed that whatever other circumstances might be connected with the disease, it had for its immediate cause, either partial or general debility; and the great desideratum in its cure hitherto has been, a remedy capable of evacuating the water without encreasing this weakness still farther. The means to which the antients resorted, and which are not yet discarded from modern practice, were ill calculated to answer this end. The cure was too generally trusted to purgatives of the most drastic kind, such as euphorbium, gambage, hellebore, elaterium, crocus metallorum, scammony, and the like, termed from their peculiar properties, *hydragogues*, while the patient was perhaps at the same time restrained from quenching his inordinate thirst.

The mild laxatives were positively said, on the authority of the great Sydenham,* to be either of no use, or even to be prejudicial. It must be acknowledged, however, that cures are said to have been performed by these drastic means; but for the reasons already mentioned it may reasonably be inferred that these were of short duration. While the accumulated water has thus been evacuated and the disorder apparently cured, the powers of life, already much weakened, have been still farther

* "Seri evacuationem quod spectat, magni refert ut diligenter observemus in omnibus hydropicis ea cathartica quæ vel segnius vel minus potenter operantur, officere magis quam prodesse." Tractatus de hydrope, p. 248 edit. 1685. And farther; "Ad hæc in omnibus hydropicorum sanationi dicatis, id diligenter est observandum ut aquæ eâ maximâ celeritate exhauriantur quam ægri vires ferre queant; utpote qui singulis diebus expurgari dibeat: nisi quod sive ob nimiam debilitatem corporis, sive ob cathartici præcedentis propter operationem plus satis violentam dies unus aut alter nonnunquam intercalari possit." ibid 250.

The following is a specimen of the cathartics used by this excellent author.

"℞. Tamarind. ℥ss. Fol. Sennæ ℥ij. Rhei ℥iss. coque in q. s. aquæ font. ad ℥iij. in colatur. dissolv. Mannæ et Syr. Ros. Solut. aa ℥j. Syr. Sp. Cerv, ℥ss. elect. e Succ. Rosar. ℥ij. M. ft. potio." ibid 252.

This, however, he says is only to be given in strong constitutions when the milder cathartics have failed in producing the desired effect. But the next, which he calls a milder, would in these days be justly termed a very violent one.

"℞. Vini Alb. ℥iij. Jalap. subl. Pulv. ℥i. ℥ing. Pulv ℈ss. Syr. de Spin. Cervin. ℥i. M. ft. potio, summenda summo mane, repetendaque, singulis, vel alternis diebus pro ratione virium."

exhausted, so as to preclude the chance of recovery; and either death has speedily followed, or the water has again rapidly collected. It ought to be mentioned, however, that some respectable authors* have condemned this

* Riverius, Hoffman, and a few other celebrated writers, observe that although in lieucophlegmasia and anasarca it be sometimes necessary to give a strong purgative in a larger dose than ordinary, yet it is highly dangerous in ascites. After many judicious remarks the latter author advises them not to be repeated above once in six or seven days. He desires to refrain entirely from gamboge, elaterium, coloquintida, and hellebore.

Arbuthnot is likewise of opinion that violent purges by dissolving the blood, have often proved pernicious.

Junker tells us that although a great quantity of water is often carried off by strong purges, yet instances frequently occur where they do no service, though repeatedly administered, but rather mischief; for they greatly irritate the bowels, weaken their tone, and promote the bursting of the lymphatics. See Swans Sydenham, p. 672.

In various parts of Hoffman's works the most judicious observations and cautions are contained on the use of purgatives in dropsy. Beside his excellent remarks under this head, see his Opusc. Med. Pract. Decad. II. Dissert. V. De Purgantibus fortioribus ex Proxi Medica merito ejiciendis. Also some valuable observations on a case that was very improperly treated by their use. Consult. et Respons. Med. Sect. ii. Case 93.

The whole of this work is highly deserving the attentive perusal of young practitioners.

"In purgantium administratione," says Reverius, "observandum est, omnia purgantia fortiora non esse frequentius usurpanda, ubi docet Galenus, (Lib. ix. de locis,) quia corpus dibilitant, et postea magor aquarum proventus exoriatur; ideoque roborantia, et aperientia frequentius quam purgantia erunt prescribenda. Et experientia nos docet, evacuationem in hoc morbo, quæ fit per urinam, melius succedere ea, quæ fit per alvum," &c. After this excellent admonition it is to be wondered at that Sydenham should have gone so much into the opposite extreme.

practice, and pointed out the evils resulting from it.

In order therefore to obviate these inconveniences a more rational mode of cure was adopted by many, namely by remedies whose operation was chiefly confined to the kidneys, aided perhaps by the occasional use of mild laxatives, with, now and then, a brisk cathartic. But though this mode proved in many instances more successful, the water having been discharged *per vias urinas* without much loss of strength, or injury to the constitution, yet serious inconvenience has sometimes attended it. It has often been found extremely difficult, sometimes impossible, to determine the operation of these medicines to the kidneys, without first acting powerfully on the stomach, or bowels, or both, and thus failing in the desired end. A remedy is yet wanting therefore which may with more certainty be depended on, and which possesses all the advantages of a diuretic, without the inconveniences mentioned. If I be not deceived by that self approbation, which has imposed on thousands, I have advanced some steps in obviating these, by means of the combination which is mentioned in this chapter. Besides

evacuating the water more speedily, and with much greater certainty, the bodily strength is not only at the same time preserved, nay often immediately improved, but the cause of the disease is likewise frequently removed. But before entering more particularly on the means of cure, it may not be improper to state the circumstances which led to the use of a combination that has been employed with so much success in a disease hitherto deemed scarcely within the reach of medical aid; and also to offer a few remarks on the mode of operation of diuretic remedies in general, a subject acknowledged to be involved still in much obscurity.

By a well known law of the animal œconomy, the blood, in order to circulate freely through the capillary ramifications of the sanguiferous system, and to furnish the pabulum necessary for the performance of the various secretions and excretions, must possess a certain degree of fluidity; or in other words, a due portion of water to dilute its more viscid parts: this is constantly varying in different bodies, and in the same body, at different times; but nature is endeavouring to guard against a deficiency, or superabundance, and

thus to preserve a just equilibrium between the watery, and other constituent parts. When, for instance, in consequence of long abstinence from liquids, the operation of purgative or diuretic remedies, of sweating, or of salivation, the blood is deprived of its serum, the loss is made up, and the balance still preserved by means of the absorbents, whose action is preternaturally increased throughout the body, in order to answer this important end. This is demonstrated by the absorption of fat, and of serous fluids effused in cavities, by the intense thirst, dryness of the tongue and fauces, and the general emaciation of the body, which invariably follow the long continuance of either of these.

Under such circumstances, the lymphatics first act upon the more fluid parts; then upon the fat; afterwards upon the muscles; and last of all upon the bones themselves. No facts in pathology are more clearly established than these, and by their extensive agency the most important purposes are effected. By their operation the most corpulent may be speedily reduced within a moderate compass, the dropsical sufferer relieved of the accumulated water,

and the jockey quickly reduced to his requisite weight.

In this way too the operation of purgatives in evacuating the water in dropsy is readily explained. By stimulating the internal surface of the intestinal canal a considerable quantity of blood is determined thither, and as invariably happens from similar irritations applied to mucus and secreting surfaces, the serous parts, with some portion of the coagulable lymph, are copiously thrown out; the determination to other organs is consequently diminished, and the action of the absorbents, agreeably to this law proportionably augmented. When, on the other hand, inordinate quantities of water, or watery fluids, are introduced into the circulating mass, the excess speedily passes off by the various outlets of the body, but chiefly by the kidneys, together with a portion of the constituent parts of the blood variously combined and modified.

Thus we perceive that in health, by the wisest and most salutary laws, the evils that must otherwise necessarily arise, in the one instance from a defective, in the other, from a redundant supply of liquids, are for a time

completely obviated, and the blood is prevented from suffering any material change in its constituent elements.

From these effects, and more especially from the quick determination of cold water to to the kidneys when drank in large quantities on an empty stomach, it has very justly been included in the class of diuretics. But it is not only in itself a diuretic, but the medium through which all substances known to possess a specific operation on these organs are conveyed thither. Thus if any of these, as the crystalls of tartar, the fixed alkalies, certain neutral salts, &c. be given in a solid form, the flow of urine will be very little, if at all encreased: but if largely diluted, it will be very considerably augmented, the quantity being much greater than if they had been separately administered. If two drachms of crystalls of tartar be dissolved in one pint of water, and drank in a given time, the quantity of urine voided will perhaps be twice as much as if the salt and the water had been administered at different and distant periods.

The principles on which this is to be explained have been beautifully illustrated by Dr. Cullen; and a knowledge of the fact has

led to one of the greatest improvements of modern practice in the treatment of dropsy; for which the medical public owe much to those distinguished physicians Sir George Baker, and Sir F. Milman; but the sanction and earnest recommendation of the venerable professor in his public lectures contributed greatly to give it general currency.

In certain diseases, however, especially in that under consideration, the order of things is materially changed. In by far the greater number of dropsical cases, the free use of diluent drinks is productive of no sensible increase of the urinary, or any other secretion. Instead of passing off by the natural channels, they are thrown out by the exhalant vessels, and effused in various cavities. The blood is thus freed from its superabundant water, and the inconveniences that would otherwise ensue are obviated.

With the view of removing such a disposition, the action of the kidneys must be excited by such means as are known to exert a specific operation on them. As however the absorbents may be the organs principally in fault, their functions also must, if possible, be restored. Such remedies therefore as possess

the most extensive operation on these parts should be resorted to.

On attentively observing the effects of the diuretic remedies in common use, there is a material difference in their mode of operation, insomuch that there appear just grounds for dividing them into three different classes, namely,

1. Such as act chiefly, if not solely on the kidneys.

2. Such as act at the same time on the kidneys, the absorbents, the exhalants, and other secretions and excretions.

3. Such as act solely on the absorbents.

Under the first class nitre is perhaps the only one which ought to be comprehended, especially when largely diluted. That in certain quantities it promotes the flow of urine is generally admitted; and that this is by a direct specific action on the kidneys is rendered probable by its appearing to exert no sensible stimulus on any other vessels or organs when administered in hæmorrhage in very large doses.

Under the second class by far the greater number of diuretics in daily use may be included. The crystalls of tartar, the fixed vegetable alkalies, certain neutral salts, the ve-

getable acids, squill, the resins, and resinous balsams, seem to exert an extensive influence over the various secretions and excretions, as well as the lymphatics.

The first of these has sometimes cured dropsy without any sensible encrease of the urine, as may be seen in Dr. Ferriars tracts, and in Home's clinical experiments; and its properties in reducing redundant fat, and causing emaciation of the body, when persevered in for a great length of time, especially in the grateful but insidious form of imperial drink, as it is termed, in common with vinegar, has frequently, and I fear fatally been demonstrated, and serve to shew its extensive agency over the lymphatic system.

The efficacy of the second in dyspepsia, especially in combination with bitters, may be attributed probably more to their power of stimulating the languid absorbents of the stomach, and the first passages to a more healthy action, than to that of neutralizing superabundant acid. And their acknowledged virtues as a remedy in dropsy seem to imply very considerable effects on the lymphatics in general, as well as on the kidneys.

In regard to squills I perfectly accord in opinion with Dr. Cullen, that they do not pos-

sess any specific operation on the kidneys more than upon every other part or excretory, to which they seem to be universally stimulants. "They readily," says he, "stimulate the stomach and prove emetic. When managed so as to pass the stomach they stimulate the intestines, and prove purgative, and when carried into the mass of blood, they are generally, and I believe justly, supposed to stimulate the mucus glands of the lungs, and to prove an expectorant." Mat. Med. vol. ii. p. 465.

Analogous in some respects to squills are the turpentines, and resinous balsams, though their effects on the stomach and bowels, in regard to proving emetic or purgative, be different. Their direct action on the urinary organs is generally acknowledged; and their stimulant effects on the habit at large, more particularly on the mucus glands of the lungs, though different in degree from squills, seem no less certain. Other substances might be enumerated which possess equally extensive powers.

Under the third class I know no substance of which I dare venture to speak with confidence except the foxglove. I have long

adopted the opinion, and not on light grounds, that this herb exerted no specific diuretic action on the kidneys; but since the contrary is, I believe, generally maintained, and since it may seem paradoxical to deny such powers to a substance which sometimes, without the aid of any other, removes dropsical swellings of considerable size and extent, in the course of a few hours, by encreasing the urinary secretion in proportion, it may be necessary to point out the reasons which gave rise to it.

For some years after I had been in the habit of prescribing this medicine I considered it, in common I presume, with other practitioners, as one of the most active diuretics in the whole range of the materia medica; and this by a direct operation on the kidneys. Nor had any doubts arisen in my mind in this respect till it was used in diseases unaccompanied with accumulations of water. The idea I had been accustomed to form of a diuretic power in any substance was, that this power would be exerted and the quantity of urine would be increased under all circumstances of the body, provided the kidneys were in a sound state; and this by a specific operation on these organs, as the substances mentioned under the

first and second classes are generally believed to do. I was surprised therefore that in no instance of disease except in dropsy, or where water was effused in some cavity, could I discover any sensible encrease of urine from the use of this herb, though many of my patients were for several weeks more or less under its influence. Nor have I observed any of those effects which often follow the administration of other diuretics, such as thirst, dryness of the mouth and fauces, or irritation in the urinary passages. In some cases the urine seemed at first sight to be encreased by it, but on minute enquiry, and attentive observation, this was undoubtedly occasioned by changes in the diet, in the quantity of liquids used, in the temperature and degree of humidity of the atmosphere, which would have happened equally in perfect health, when no medicine was used. Patients too, when asked "if the quantity of urine was encreased," would sometimes answer in the affirmative. Every medical man of observation, however, must be aware how apt they are to do this, and how necessary it is, in order to obtain correct information, to avoid such direct questions, but to suffer them to describe their own sensations or symptoms. In some of

my consumptive cases, the urine was sensibly encreased in quantity, but this happened either when there was no doubt of the presence of water in the chest, when the legs were anasarcous, or when the colliquative diarrhæa or sweat was lessened or removed by this herb.

When its operation was very powerful in dropsy, pain was sometimes complained of in voiding urine, but this arose evidently from the efforts used in restraining the sudden and irresistible inclination to empty the bladder when quickly distended, and is what persons in health experience after using large quantities of cold diluting drinks, especially weak punch, if they be forced for a time to restrain the inclination.

On the whole then I am led to conclude that this herb exerts no diuretic operation on the urinary organs, but that as a successful agent in dropsy its effects are confined to the absorbents, and probably in a certain degree extended to the exhalants.

The only hint of a similar opinion being entertained by any other person which I have met with is the following; and this did not fall in my way till some years after my own had been formed. "In the opinion of Professor

Hecker, of Erfut, Journal der Erfundungen" (say the editors of the Medical and Physical Journal, from which this is copied) "even the digitalis, which is perhaps too generally prescribed in dropsy, appears to possess no specifically diuretic virtues. This medicine obviously diminishes irritability, so that *the pulse becomes slower*, while it moderates tensions and spasms. Its revolvent and diuretic powers, therefore, must be ascribed chiefly to those effects. Hence it will most probably effect a cure in spasmodic dropsy, but prove of no service, in that arising from other causes: and thus we may account for the contradictory opinions which have hitherto prevailed respecting the efficacy of this medicine."

I lament not being in possession of the full sentiments of this learned professor on the subject of digitalis: this is sufficient, however, to shew the consistency of his opinion, and that he does not regard it as possessing two directly opposite effects, as seems very generally to be done in this country; while it serves to add weight to that which I have advanced, and which will be more fully stated hereafter.

The same reasoning applies to its operation on the bowels; never having with me acted as

a purgative except in dropsy, or where there was more or less serous accumulation. If this opinion should prove well founded, a question naturally arises, how its effects are to be explained, when it encreases the urinary secretion with so much promptness and effect in dropsy? That this is done entirely by its restoring the impaired or lost functions of the absorbing lymphatics, and probably by lessening serous effusion at the same time, the reader is requested for the present to take for granted: the farther proofs will be given hereafter. If these vessels be placed in a condition of taking up freely and readily, and conveying to the blood fluids effused in cavities, and the exhalants be at the same time acted upon so as to throw out no more than the ordinary quantity which health requires, they will be determined to the kidneys as the natural outlets.

The practical inferrences arising out of these facts and observations seem obvious. If by experience it be ascertained that certain substances act chiefly if not solely on the kidneys; others on these, and the absorbents, and probably, at the same time, on the bronchial glands also; and others again entirely on the absorbents and exhalants, is it not reasonable

to infer, that by blending and combining these, according to their known specific powers, so that only such parts may be acted upon as are more immediately diseased, the wished for end is much more likely to be answered, than if separately administered, when they are partially applied, and probably not to the organ which most needs their aid? that this will be fully confirmed by practice I have no doubt in being able to prove.

Hitherto in administering diuretic remedies the only object which the practitioner had in view was to stimulate the kidneys; but the most active of these have been found inadequate to the purpose of carrying off the water, although there was ample proof of these organs being fully acted upon. In conducting the cure of the disease much more extensive views have been aimed at by the author of this treatise, with what success will, in due time, appear. By the various combinations he has offered, if he be not much deceived, the water will often be speedily evacuated without any unpleasant, sometimes, without any sensible, effects on the habit; when any one of their constituent ingredients, even in the largest doses, will completely fail. Of

this truth the perusal of a few of the annexed cases will, he thinks, bear ample testimony. The digitalis may thus be administered with the most perfect safety; with greater certainty; and a much smaller dose will often be found to answer the proposed end.*

SECT. II.

Indications of Cure.

After removing such of the remote causes as may be within reach, the Indications of Cure founded on the foregoing principles, and on the view which has been taken of the disease, may be comprehended under the four following heads.

1. To restore the lost or impaired action of the absorbents, so as to enable them to take up and convey to the blood serous fluids effused in cavities.

2. To determine to the kidneys the course of the blood charged with the fluids thus absorbed.

* Dr. Ferriar tells us that the digitalis is much more efficacious in combination with other diuretics, than when given alone. This has been found to be the case with respect to squills; and the generality of practitioners are in the habit of administering two or more diuretics together; but as this has been done at random and directed by no fixed principles, the result has not been so favorable as might otherwise have happened.

3. To lessen inordinate exhalation, by giving tone and energy to the whole habit.

4 To remove weakness or other disease of particular organs, and thus by restoring and preserving the healthy balance between the exhalants and absorbents, prevent farther accumulation.

If the patient be far advanced in years and his strength much exhausted by intemperance, especially in early life, and there be reason to apprehend disease of the liver, or some other important viscus, a remedy should be selected of such combined powers as might answer all these indications at once. A combination of foxglove, certain tonics, saline diuretics, and calomel in moderate doses, will be found the best in such cases.

But if the disease occur in delicate subjects of either sex, endowed with a high degree of sensibility and irritability, with a soft smooth thin skin, a white shining, or transparent appearance of the anasarcous swellings, if there be any, readily pitting on pressure, more especially in females from frequent parturition, profuse uterine hæmorrhages, or similar debilitating causes, without any organic affection, the digitalis alone will generally succeed; but its sa-

lutary effects will be greatly promoted by mild tonics, steel in particular, and moderate doses of the fixed vegetable alkaline salts. Calomel, squills, and the crystalls of tartar, if at all admissible, must be administred with extreme caution and in very small doses.

But when it happens in fat corpulent subjects, of a dull phlegmatic habit, and sluggish inirritable fibre, with hard anasarcous swellings, of a livid hue, yielding reluctantly to, and not retaining, the impression of the fingers, especially if they had indulged freely in the use of porter and beer, such a combination as will produce the most extensive operation on the habit should be prescribed. The foxglove, calomel, crystalls of tartar, and squills, must be administered in full doses. Tonics will in general do no good in the beginning; they even sometimes do harm; nor is the digitalis to be depended upon without the aid of the other remedies.

By proceeding agreeably to these principles, the advantages are incalculable. Instead of losing bodily vigour, my patients have repeatedly declared, and it was very visible to others, that the appetite and general strength, improved almost from the moment of beginning medi-

cine. Such indeed was the rapidity with which some were unloaded of the water, that from the sudden depletion, and want of pressure, on the lungs, heart, and large vessels, precautions were absolutely necessary to prevent syncope; and some expressed serious alarm, to use their own words, "least they should be drained to death."

SECT. III.

Particular Remedies.

Blisters. The great efficacy of these in procuring almost immediate relief from urgent symptoms, before other remedies can possibly act on the absorbents and kidneys, I have repeatedly witnessed. The stimulus exerted on the cutaneous vessels and nerves seems to be quickly imparted by symyathy to the absorbents within the chest, and in a certain degree, perhaps to the heart itself; and thus a more vigorous absorption, circulation and free respiration ensue for a time, and the copious evacuation of serous fluid which soon succeeds doubtless contributes to the relief almost always experienced.

In all urgent cases therefore, with these

views, I direct a large blister to be applied immediately to the breast, pit of the stomach, region of the heart, sometimes between the shoulders, or as near to the seat of pain, oppression, or accumulation of water, as possible; to be repeated afterwards as circumstances may require, or indeed as often as the patient will permit; which is far preferable to a perpetual blister. The breathing is often relieved in a few hours, or as soon as the cantharides begin to act upon the skin, which encreases in proportion as their secondary or evacuating effects are added to their stimulant. The spasmodic and convulsive contractions of the diaphragm, intercostal, and other neighbouring muscles, even of the heart itself, frequently consequent upon their laborious exertions to overcome the load with which they are oppressed, are likewise greatly relieved by the blisters; and there is reason to believe that the irritation they sometimes excite in the urinary passages, tends to facilitate the operation of diuretic remedies. As however their effects are only transient, so they are only to be resorted to as auxiliaries to more active and permanent means.

Digitalis. In administering this medicine

the principal circumstances to be regarded are, the age, strength, peculiar habit of the patient, stage of the disease, and degree of urgency of the symptoms. If the disease be far advanced, and the symptoms such as to indicate immediate danger, the dose should be such as to produce a speedy effect. In general an ounce of the standard infusion* or a grain of the powder taken three times a day, morning, noon, and night, may be regarded as a full dose for an adult of moderate strength. If the herb be genuine, and in perfect preservation, the habit will feel the influence of this quantity in a few days; sometimes in forty eight hours the flow of urine has been considerably encreased. In delicate female constitutions, or in males whose strength has been much reduced, this quantity should not be given oftner than twice in the day, evening and morning; and in young subjects the dose must

STANDARD INFUSION.

* No. 1.—℞. Dig. Purp. fol. incis. ℥ss. Canellæ Alb. contus. vel Zingib incis ℈j. Aq. ferv. ℥viij. Infunde per horas iv. in vase operto; dein liquorem effunde.

If the leaves be used as they are suspended in paper bags in a room in which a fire is constantly kept in winter, without farther drying, which should always be done for infusion, the liquor will pour off perfectly clear, and save the trouble of straining. The stalks and large fibrous parts should be separated, and the leaves cut into small pieces.

be reduced still farther in proportion to the age. The advantage of long intervals is, that we are seldom taken by surprise by its deleterious effects, and that it does not so readily disorder the stomach and habit at large, while its diuretic effects are more certain. A very small dose given at short intervals, and continued for a length of time, has been known to produce the most alarming effects. Before I became familiarized with its various effects, especially if the patient was not within my daily rounds, it was generally administred in a moderate dose, and continued for three or four days successively, if in the mean time it produced no sensible effect: it was then discontinued for a day or two, after which it was resumed in encreased quantity, and persevered in as before, until the urine began to flow more freely, or there was some other proof of the habit being affected; it was then judged prudent to discontinue it. To those who have not been in the habit of prescribing it, this method may still be adopted, as any dangerous consequences that might otherwise arise, will thus effectually be obviated, it being well known that its full effects have appeared some time after it has been withdrawn. Similar precautions are, I perceive, recommended

by an author who deservedly holds a very high rank among the medical philosophers of the present day. "Its use," says he "should not be continued for a length of time, but stopped for certain intervals; and it should never be exhibited for more than five days together."*

But when the patient was within my immediate reach, so as to be visited at least once every day, which ought always to be done while he is under a course of this medicine, such delays were judged unnecessary, especially in hydrothorax, when an hour is in some instances of consequence. I now direct it to be given at once in such quantity as to produce some sensible effect in two or three days: and by long and frequent use the habits that are more or less susceptible of its operation are so familiar to me as rarely to be disappointed, if the preparation be good. The first object, namely, that of evacuating the water, is generally completely answered within the first week, without any untoward circumstance, and sometimes without any encrease of the original dose.

* Hufeland, Uber die Natur, &c. der Scrofuln. From this Essay, in my opinion, one of the best ever published on Scrophula, those who have not access to the original work, will find copious extracts in vol. iii. of that valuable repository of medical information, the London Medical Review and Magazine.

* In the exhibition of this herb in dropsy, the urinary secretion is not the only point to

* In all violent and dangerous affections where the delay of every day, nay, of every hour gives additional force to the disease, the importance of establishing standard preparations and doses of powerful medicines must appear sufficiently obvious. It is equally incumbent on the physician to be circumspect in not hazarding too large a dose at first, whereby danger might be incurred, as it is in not losing precious time by a timid administration of weak and ineffectual doses. In consumption and certain chronic diseases, where the progress may be slow, I hold it to be the best plan, (and I have on a former occasion given full directions on this head, Medical and Physical Journal, vol. ii. p. 119) to begin with small doses, so as to introduce the medicine in the most gradual manner. But in certain acute affections, and in that under consideration, unless the habit be made to feel its effects speedily it will perhaps come too late. These remarks are called forth by the language used by authors of high character on this part of the subject of digitalis. "Let me observe once for all," says Dr. Ferriar, "that nothing is less accurately fixed in medicine, than one of its most important, the doses of remedies. The proper dose of a medicine is undoubtedly that quantity which produces the effect required, whatever be its numerical denomination. A full dose of the foxglove is therefore merely a relative term, &c. Essay on the Medical properties of digitalis Purpurea p. 8. et seq.

If Dr. Ferriar thought it an object of so much importance, and every practitioner must think the same, to fix more accurately the doses of medicine than has hitherto been done, it was surely the more necessary for him to be particular in pointing out the proper dose of the foxglove which was suited to different ages, and constitutions, as his experience might enable him to do, because more mischief has avowedly arisen from want of knowledge in this respect than from that of any other medicine. For how, it will naturally be asked, are inexperienced practitioners to know this proper dose unless it be pointed out by those who, like Dr. Ferriar, are enabled to do so? It is surely of little use to be told that "the proper dose is that which will produce

be attended to. He who does not attentively watch the state of the pulse, the stomach, the bowels, and sensorial functions, should never prescribe it. But if these be carefully watched, and the medicine withdrawn as soon as

the effect required;" for every one knows this. If the writers on the Materia Medica had held forth such language; if they had told us that the proper dose of the muriat and other preparations of mercury, of opium, of emetic tartar, and similar active medicines was "that quantity which produced the effect required," without specifying its numerical denomination, we should be as ignorant at this time in this respect as many practitioners are of the real doses and proper management of the foxglove; and instead of applying them as successful agents in combating the ravages of disease they would be instruments of destruction in their hands. A full dose of every other medicine, is a relative term, so is a medium or small dose.

"As I have already observed," says Dr. Messman in his Essay on Scrophula, "I conceive the proper dose of a medicine to be just that quantity which will produce the desired effect; now the proper dose of the digitalis is what will, by gradually bringing the system under its influence, retard the motion of the heart, so as to reduce its pulsations to a given number, and to accomplish this object without inducing any of its deleterious or injurious effects." p. 77 et 78.

Such a dose as will reduce the pulsations of the heart to a given number will indeed be a wonderful one, and such as I have no hesitation in saying, will in many constitutions never be discovered.

If the best writers on the Materia Medica have deemed it necessary to point out the exact doses of the common remedies suited to different ages and constitutions, surely this is more especially so with regard to the most active.

Under this impression I shall feel it incumbent upon me to be particular in specifying the precise doses of the digitalis and other remedies which have been found successful in dropsy, in the fullest conviction of its necessity to young and inexperienced practitioners.

any of them are materially affected, I hesitate not to affirm, that no serious inconvenience will ever ensue from it, and that it may be administred with as much safety as any of the more active medicines in daily use.

The infusion I prefer to every other preparation, both because, if the herb be preserved as directed, it is liable to less variation than the powder, and because it furnishes a ready vehicle for other active and no less essential ingredients. The formula No. 2.* will be the most proper to begin with in simple cases; but when the disease is complicated, one or other of those which follow must be had recourse to according to the particular circumstances of every individual case as shall hereafter be pointed out.

If the digitalis be principally trusted to, and the flow of urine be not encreased within the first week, that is, provided some part of the habit be sensibly affected by it, there will be reason to suspect such a morbid state of the lymphatics as will only yield to diuretics of a different class. These should therefore

No. 2.—℞. Infus. Dig. Purp. ℥j. Aq. Menth. Pip. ℥iij. Kali pp. gr. x. ad ℈j. Sp. Æth. Nitrosi. vel Sp. Æth. Vitr. C. ℥ss. ad ℥j. M. ft. haustus bis terve de die sum.

be resorted to; or if they have been already used, they should be given in encreased quantity. Such is now my confidence in the combinations of which various formulæ are given, that I have no hesitation in promising a speedy evacuation in the first instance, whatever may be the probability of a permanent cure.

When the medicine acts powerfully on the bowels, although there be no pain or griping, yet the vital powers are more speedily exhausted than from the operation of the most drastic purgatives. Hence this should never be suffered to take place, but when it does happen, it must immediately be checked. The operation in general is sudden and unexpected, a number of copious watery evacuations following one another in quick succession, attended with extreme faintness, languor, and prostration of strength. They are easily checked at first, but the proper remedy should be at hand, and such as to produce an imme diate effect. The tincture of opium in general, will succeed, and is preferable to the extract in a solid form. From ten to fifteen drops should be given in some cordial water repeated at short or long intervals according to the greater or less frequency of the evacuations and the conse-

quent debility. The foxglove should at the same time be discontinued for a day or two, though no other effect be as yet discernible. When the bowels are too loose naturally, or when it shews a disposition to act upon them early, five or ten drops may be given with each dose of it.

So apprehensive do the practitioners of Manchester appear to be of its operation on the bowels, (and few are more conversant with this herb) that they generally begin by combining opium with it. In certain cases, and in inexperienced hands, this may be a necessary precaution, but as a general rule of practice it is inadmissible; because in some instances it will counteract its salutary effects. A lax state of the bowels I have uniformly observed to be extremely favorable, nay almost necessary, to the successful exhibition of digitalis and other diuretic remedies, while the opposite state is as adverse to it. Hence when opium retards the natural action of the bowels, as it too generally does, it will prove manifestly prejudicial.

When the digitalis violently disorders the stomach and produces that train of alarming symptoms which are only the consequence of

its unguarded or injudicious use, frequent doses of the confectio opiata, in the form of pills, with warm cordials in very small quantity, (for the stomach rejects immediately every thing in large draughts) warm volatile, anodyne embrocations to the epigastrium,* and spirituous fomentations to the feet, will be found the most effectual means; and if the stomach should reject every thing, rich broth glysters in small quantity, with from 80 to 150 drops of laudanum may be thrown up, and repeated according to circumstances: If these be had recourse to in due time they will assuredly speedily quiet these symptoms.

Although preference be given to the infusion in the first instance yet as soon as the water has been evacuated and a slow gradual course of the digitalis and other remedies is required to keep up a due action of the absorbents, to determine the fluids to the kidneys, and thus their farther accumulation is intended to be

* No. 3.—℞. Lin. Camph. ℥ij. Sp. Ammon. C. Tinct. Opii aa. ℥ſs. M. ft. Lin.

This liniment well rubbed upon the epigastrium or abdomen, I have repeatedly prescribed with immediate relief in violent sickness and vomiting, or acute pains of the bowels. The parts should be covered with hot flannel afterwards.

prevented, the powder in the form of pills† will be found more grateful to the patient and more convenient in every respect.

Squills. The use of squills in dropsy is of very antient date. The powder and vinegar of this root were held in high estimation by Galen, Cælius Aurelianus, Celsus, and others among the antients, but more especially when the disease was combined with asthma so as to threaten suffocation; and their being in constant use from those periods to the present times is the strongest presumption in favour of their superior virtues. Like almost every other active remedy, however, they have been warmly commended by some, and condemned by others; and, as is usually the case, successful instances are brought forward on the one

† No. 4—℞. Dig. purp. fol. pulv. Scillæ recent. exsicc P. aa. gr. jx. Calom. gr. vj. Myrrhæ ℈ij. Crystall. tart. Pulv. ℈j. tere simul et extract. Gent. q. s. ft. Pil. xxiv. Sum. duas usque ad tres sing. noct. et mat. superbib. liquor. infra præs. cyathum vel libræ quadr.

No. 5—℞. Cryst. tart. Pulv. ℥ij. Solv. in Aq. ferv. libj. add. Rad. Zing. incis. ℥ſs. Sacch. pur. q. s. Sp. Iuniper. ver. ℥iſs. vel vini rhen. ℥iij. M. Propinat æger quant. hancce vel duplicem quotidie.

As soon as the patient begins medicine, the free use of this or some diluting drink according to former habits, is directed as an absolutely necessary part of the plan.

hand, and failures, even fatal ones, on the other. This must ever be the fate of powerful agents according as they are directed by skilful and judicious hands, or the reverse. The enormous doses which were used by the antients, and even by some of the moderns, must have been generally far too violent to answer the end proposed; and indeed has been the principal cause of their frequent failure.

When administered alone it has been found difficult, often impossible, to determine their operation to the kidneys. They have frequently excited either nausea, vomiting, or diarrhæa; and from their having in a few instances succeeded in curing the disease in this manner, practitioners have attempted to evacuate the water by keeping up a constant nausea, and sometimes by exciting vomiting. The action of vomiting determines powerfully the blood to the stomach, lungs, and neighbouring organs, and considerable quantities of the serous parts are mechanically squeezed out from the capillary extremities of their vessels; while the lymphatics within the influence of the muscles concerned are likewise excited. Thus by a twofold operation the water in dropsy may sometimes be got rid of, and the disease cured. But

for the reasons already stated the cure of dropsy of the chest should never be attempted by vomiting.

Valuable, however, as this medicine is allowed to be in some cases of dropsy, it has been far too indiscriminately used. There is perhaps no species of the disease for which it is so well adapted as that under consideration,* and there are certain instances of this for which it is more particularly calculated than others.

In very fat subjects at an advanced age, especially when there is chronic catarrh, asthma, or cough, and the bronchial tubes are loaded with large quantities of viscid phlegm, expectorated with much difficulty, squills will be found highly beneficial both as an expectorant, a diuretic, and by promoting absorption. In such cases they may be given in very full doses so as even sometimes to keep up nausea, which is conducive in no small degree towards a free excretion from the bronchial vessels. As this, however, may interfere with the principal object, that of evacuating the water, it should not

* It is highly probable that the cases of dropsy, "præsertim ubi asthma ad suffocationis fere metum concurrit," for which the antients found this medicine more peculiarly adapted, were attended with water in the cavities of the chest. See Hoffman vol. vij. p. 455.

be induced until the urine begins to flow with freedom. The preparations best suited for such cases are the oxymel, vinegar, or Tincture: the two former I have generally preferred,* because the other ingredients with which the squill is combined seemed to add to its virtues. But when these urgent symptoms are removed, or the first object is attained, and a slow gradual operation only is required, the powder in the form of pills, No. 4. will be found more convenient.

In thin, delicate, especially female constitutions, with weak irritable stomachs, this medicine should be administered with extreme caution; and it is scarcely adviseable in any other form than that of pills combined with small quantities of opium; and not even then, unless the bronchial vessels should be loaded with viscid mucus. The stomachs of such subjects are extremely susceptible of its action; and if this organ be once disordered, it will be found dif-

No. 6.—℞. Tinct. tolut. vel Benz. C. ℥ss. ad ʒi. Muc. G. Arab. vel Ov. Vit. q. s. ut miscr. Infus. Dig. Purp. ℥i. mell. Scillæ ʒi. ad ʒij. Sp. Æth. Vitr. C. gtt. xxx ad ʒi. Kali pp. gr. x. ad ℈j. M. ft. Haust. ter ind. s.

The author is not ignorant that here a Kali Acetat may be formed, but the Kali pp. will still predominate.

ficult to persuade them afterwards to persevere in the use of any medicine. If they should unfortunately produce such unpleasant effects in those cases where they are deemed absolutely necessary, the means recommended for the noxious effects of the foxglove will be found the most efficacious.

Saline diuretics though precarious and uncertain in their operation, as they are commonly administered, yet in combination with the other means, and largely diluted, will be found powerful auxiliaries. Those in ordinary use are, the crystalls of tartar, *Kali præparatum*, or fixed vegetable alkali, and *Kali acetatum*, commonly called the *Sal diureticus*.

Crystalls of tartar, have been much used of late years, and frequently with great success in dropsy. Venienti Manghini, an Italian physician, seems to be the first who brought this medicine into repute in dropsy. In the Comment. Bonon. Tom. iv. several successful cases of this disease are published by him. The dose was from four to six drachms daily. In many of these cases from twenty to forty days elapsed before it had any sensible effect on the bowels or kidneys; but afterwards the bowels became loose, the urine thick, bilious,

and sabulous. Many of the patients had swellings of the liver and spleen, which were likewise removed. The medicine produced great weakness and emaciation, but the subjects being young, and the disease generally of a few months standing, they soon recovered their strength and flesh.

These cases appearing to professor Home of Edinburgh authentic and very important, he put this medicine to the full test of experiment in the Royal Infirmary in the year 1769. In his clinical experiments published in 1780, the result is given in detail. It was administered largely diluted in the proportion of from four drachms to an ounce of the tartar to ten and sixteen ounces of water, generally in the morning. With him it was found to encrease the urine, thus diluted, in as many hours as days with Manghini; and on the whole it succeeded beyond his expectations.

Dr. Ferriar appears to have been so successful with this remedy as to prefer it to every other.

It has sometimes been given in very large doses undiluted, and at other times in moderate and small quantities largely diluted, and it has succeeded in both ways. But in the former

mode it has often failed after a long and tedious course of it, and when it has succeeded in evacuating the water in either way, the patient has sometimes been left so extremely weak and emaciated, as to preclude the hope of recovery from other means; and many have thus died of mere debility, *without any evident cause*, as has been said; of which Dr. Milman gives instances; and many more might be added. The cause of this, however, is sufficiently obvious; it is to be attributed to the peculiar properties which it possesses when persevered in for a great length of time in exciting the action of the lymphatics to such a degree as not only to absorb the effused fluids, but fat and muscle, and thus producing emaciation, marasmus, and their usual concomitants, debility, and universal exhaustion.

Hence it may be inferred that this substance is more particularly adapted to certain constitutions and stages of this disease than to others. These cases are nearly the same with those for which squills are calculated, namely, very fat subjects, especially when the legs are tense, hard, of a livid hue, and in which the accurate Withering has told us the digitalis alone is not to be depended upon. It seems, however, to

have no effect like squills in promoting the bronchial secretion. In these habits the only remedy from which any material or lasting benefit can be expected is a combination of crystalls of tartar, squills, calomel, and digitalis,* together with such other auxiliaries as may be suited to the particular circumstances of the case, continued in for a great length of time. On the other hand, in thin delicate habits, where the complexion is pale, the general strength much impaired, with every evidence of a tenuity or an impoverished state of the blood, great weakness or irritability of the bowels, and where there appeared to have existed in health a pre-disposition to emaciation, to inordinate lymphatic absorption, and secretion of pale urine, if at all administered, it should be given with extreme caution, in very small doses, blended with warm aromatics, and tonics, and be withdrawn as soon as the urine is encreased in quantity. Nor should it be resorted to till other means have been tried in vain, which is rarely the case, as the water is in general evacuated with great facility by the

* No. 7.—℞. Fol. dig. purp. pulv. Scillæ pulv. aa. gr. i. Calomel. gr. ſs. ad gr. j. Cryst. tart. ℈j. ad 3ſs. Syr. Zingib. q. s. ft. bol. sing. noct. et mat. s. Besides this No. 5. should be given freely.

foxglove in combination with tonics under such circumstances.

I have not found it necessary to prescribe it in any case in the large doses recommended by Manghini, Home, and others. Every purpose will be answered in the proportions of which formulæ have been given.

Dr. Home found that its success was to be depended on most in anasarca, next in ascites, and least in hydrothorax. My experience does not enable me to speak decidedly on this point, but with the precautions laid down, it warrants me in recommending it as a valuable and powerful auxiliary in evacuating the water in every species of dropsy. But where, for the reasons assigned, its use is deemed equivocal the,

Kali præparatum may be administered with advantage. From long experience, I am inclined to prefer this in many cases, as one of the most safe and certain in its operation of all the saline diuretics. It may be used with advantage in all constitutions, ages, and circumstances of the disease; and when the water is removed it will be found equally efficacious in preventing farther accumulation and in giving strength and energy, in combination with aromatics,

bitters or other tonic remedies.* While it excites the action of the absorbents and determines to the kidneys, it seems at the same time particularly calculated to strengthen the digestive organs; nor does it ever disorder the stomach or bowels, when prescribed in moderate doses like many of the other diuretics. Its operation seems to be confined chiefly to a certain morbid state of the absorbents, since when given largely in diseases unaccompanied with watery accumulations it produces very little, if any, diuretic effect; whereas crystalls of tartar seem to act more readily on these vessels and on the kidneys in health than in disease, as may be readily ascertained on trial. To most palates however it imparts a pungent bitter nauseous taste, which ought to be corrected by a little addition of peppermint water or essential oil. The preparations of æther will answer this purpose also.

Broom ashes have been long recommended as a remedy in dropsy; as however their virtues evidently depend on the quantity of this

* No. 8.—℞. Infus. Gent. C. ʒix. Kali pp. gr. x. ad ℥j. Tinct. Cort. Aur. ʒiſs. Sp. Æth. Nitr. gtt. 40 ad ʒi. M. ft. haust. ter ind. cum Pil. infra præs. No. ij. s.

No. 9.—℞. Ferr. Vitr. Kali pp. aa. ʒſs. Myrrhæ ℥ij. simul in pulv. subt. tere et Extract. Gent. q. s. ft. pil. xxiv.

substance contained in them, it is scarcely necessary to remark that the alkali will be found far more efficacious when divested of the crude substances with which it is combined.

The dose for adults is from ten grains to a scruple three times a day in one or other of the formulæ subjoined.

According to the condition of the first passages, it will be neutralized for a greater or less time, whereby the alkalescent quality will not be imparted to the general habit. It must therefore be continued for some time before we pretend to decide on its efficacy. Its diuretic virtues are promoted by the nitrous and other æthers, by the turpentines and certain balsams. During its exhibition the patient must be cautioned against the use of saccharine and all other accesent matters; also of malt liquors and the like.

Æther and its preparations, whether we consider their antispasmodic or diuretic properties, are excellent auxiliaries in this disease. In full doses they often afford immediate relief of the extremely difficult, irregular, and spasmodic breathing, before other remedies have had time to act. But as the relief they afford is very transient they are never to be

trusted to alone, but should always be directed in conjunction with the other remedies when the difficulty in respiration is very urgent.

I have generally preferred the Sp. Æth. Vitr. C. or Hoffman's anodyne liquor, fancying that it possessed superior virtues to the common vitriolic æther in promoting the efficacy of the other remedies; but in the choice of these the practitioner may use his discretion.

The *Sp. Ætheris Nitrosi* will be found a valuable medicine in all cases and stages of hydrothorax. It seems to possess less antispasmodic, but greater diuretic, powers than the former præparation. Both these substances impart a grateful warmth to the stomach, and contribute to relieve the flatulency which is often so troublesome.

The *Resins and resinous balsams* will be found useful in those cases for which squills and crystalls of tartar are particularly adapted, in combination with these substances, especially in what are termed cold phlegmatic constitutions, when the lungs are loaded with hard viscid phlegm. If there be reason to suspect great torpor of the liver, if the urine be very thick, of a jaundiced appearance, the eye and

countenance yellow, the turpentines will in such cases be found highly beneficial, both in stimulating the vessels of the liver, and in promoting the action of the alkaline salts and other diuretic medicines.

The Tinct. Benz. C. the T. et Bals. tolut. I have generally preferred; but the terebinth. Chiœ et venet. the Bals. e Mecca, Canadens. and Copaibæ, may likewise be used with advantage, incorporated with other substances by means of mucilage or yolk of egg.

A Liniment composed of equal parts of the tereb. Venet. or chiœ and sweet oil well rubbed on the region of the liver will be found useful in exciting the action of that organ, and when mercurial ointment is judged necessary a small portion of turpentine or camphor may be blended with it with advantage.

Laxatives. As purging forms no part of my curative indications in this disease, little remains to be said on this head. Certain circumstances occur, however, which render the exhibition of a mild laxative sometimes necessary. A constipated state of the bowels occasionally attends the disease; and contrary perhaps to what might be expected *a priori*, is extremely adverse to the operation of diuretic

remedies, as has already been observed. Whilst a constant and violent determination to the bowels by means of active purgatives, lessens in proportion the secretion by the kidneys, a moderately lax state of them contributes in a great degree to encrease it. Hence, if the body be not naturally open, the interferance of art is absolutely necessary; and this should be done by such laxatives as are known to act at the same time on the kidneys.

It is a good plan to administer a combination of calomel and crystalls of tartar at night,* and if necessary, to quicken their operation the following morning by more active means in a liquid form.† In this way the operation on the kidneys is often very considerable; and from the free absorption of both these substances which takes place during sleep, the action of the lymphatics is not only promoted, but, if there be disease of the liver, or other viscus, an additional object is attained.

When the patient refused to conform to a

* No. 10.—℞. Calomelan. gr. ij. ad iv. Crystallor. tart. p. gr. x. Zing. Pulv. gr. v. probe simul in pulv. subt. tere et Syr. Zing q. s. ft. bolus h. s. s. et seq. Matutino degir. æger. Haust. infra præs.

† No. 11.—℞. Infus. Sennæ tart. vel Inf. tamarind. cum Sennæ (Ph. Ed.) ℥x. mannæ ℥j. Tinct. Sennæ vel Jalap. ℥ij. ad ℥ſs. M. ft. haust. mane sumendus.

plan of medicine calculated to effect a radical cure, or when this had been attempted in vain in certain dropsies, especially ascites, I have known the disorder kept in check for a considerable time by means of similar purgatives occasionally resorted to. But the relief is of short duration, and the water accumulates afterwards with greater rapidity.

Calomel and other præparations of Mercury. If there be any substance in nature which approximates nearer than another to what is termed a *specific*, this substance is mercury, judiciously administered. Not only is its efficacy fully ascertained in various diseases whose causes and nature are well understood, but in several other morbid affections of whose pathology we still remain ignorant. After every other remedy has been tried in vain, this mineral properly used frequently performs a cure. In dropsy, as far as I know, it has only been resorted to in an irregular and casual way, either with the view of reducing enlargements of the liver or other organ, from which the dropsy was supposed to arise; or in conjunction with squills, in order to determine *their* operation with greater certainty to the kidneys. But ample experience has enabled

me unequivocally to ascertain that its efficacy is far more extensive; and that its salutary agency is not only exerted in the reduction of morbid indurations, but in exciting powerfully the torpid and languid action of the absorbents also, as well as of the whole system of secretory and excretory vessels; of removing disease under which they may labour, and thus promoting the operation of all other diuretic remedies. This, however, will depend in a great measure on the quantity, and mode of exhibition. If any of its oxyds, or saline combinations, be introduced into the stomach in their crude unqualified state even in moderate doses, they will tend rather to defeat than to promote our wishes.

The preparation which I have generally preferred is calomel, because it is less liable to variation of strength, and is more readily blended with other substances. Whether it be intended to act on the bowels as a purgative, or, by entering the circulation, on the secretions and absorbent vessels, its virtues will be materially encreased by previous trituration and minute division of its particles with some saline substance as in No. 4—10—14; its operation will be more speedy and certain, at the

same time that a much smaller quantity will be found sufficient to answer these purposes. It has been the practice of late with many medical men in this country, for there is unfortunately a fashion in medicine as well as in other things, as has been the case for some years in hot climates, to prescribe calomel in the immense doses of ten, fifteen, and twenty grains even for young subjects; and I have repeatedly heard practitioners boast of having given these quantities to children as a purgative; but I will venture to affirm that such liberties cannot often be taken with the human constitution without the most serious consequences; and that if we wish the medicine to act upon the bowels, two grains will produce a more certain and speedy effect thus prepared and blended, than ten will do in the ordinary way, without any, or comparatively very little, pain, irritation, or griping. If the bowels be very sluggish or torpid the addition of an equal quantity of the resin of Jalap will in general answer the purposes of a gentle but sufficiently active purgative; for this substance, even gamboge, is rendered perfectly mild by the same mode of preparation, without losing any of its active properties.

In general this medicine will be found adapted for the same cases, constitutions, and circumstances with the crystals of tartar and squills, and the same cautions and restrictions will apply to both.* When unusual languor or torpor pervades the whole frame; when the eyes and skin are actually yellow; the urine is thick, crude, and loaded with bile; when there is reason to suspect accumulation of viscid bile in the hepatic ducts, and more especially if with these the liver itself or any other organ of consequence be enlarged, the bowels should be occasionally stimulated by moderate doses of mercurial purgatives, such as No. 13, at the same time that one or two grains of calomel as in No. 4. may be given every night at bed time with the view of charging the habit with it, and persevered in till the mouth be slightly affected. Frictions with mercurial ointment saturated with camphor, or with a small addition of Venice turpentine, to the region of the liver, will be found useful in such cases.

In all instances, except those where the disease arises from mere debility, and under the circumstances in which it has been observed

* Vide page 179 et 183.

the crystalls of tartar and squills are to be used with extreme circumspection, some mercurial preparation must be had recourse to from the beginning, as a necessary part of the plan of cure. Even in these, if there be organic affection which may be suspected to have any influence in keeping up the disease, it must not be delayed till the water has been removed. It will be more prudent, however, to introduce it through the medium of the surface; or if it be given internally it ought to be in small doses blended with warm aromatics, and opium if necessary. The length of time the mercury is to be continued will depend upon a variety of circumstances which must be left to the judgment and discretion of the practitioner. In those cases where a course of calomel, crystalls of tartar, squills, and foxglove are particularly recommended, it will not only be necessary to begin with it, but to continue its use for a great length of time after the water has been evacuated and the disease has been apparantly cured.

Except where the progress of the disease, or of any organic affection connected with it, is very rapid, its effects will be more certain and permanent by a gradual introduction. By

this means the gums may be kept slightly affected, and the habit under its moderate influence for a considerable time, a precaution which is always advisable. Instances have occurred where salivation either accidentally or intentionally induced has cured the disease; but unless all other remedies have failed, and there be some local tumour or disease which may have resisted its ordinary mode of exhibition it should not be carried so far, since it has been known sometimes to produce the disease.* Without the aid of mercury thus managed, though the water may be repeatedly evacuated by the other remedies, there will be little probability of permanent relief in most cases; even in those apparently arising from mere debility, it should be directed in small doses internally in combination with tonics, or introduced into the surface in the form of ointment saturated with camphor.

Such seems to be its extraordinary power over organic affection of almost every description, that I have had strong grounds for believing offifications of the valves of the heart have been considerably relieved or checked in their progress, if not removed by it; and we

* Vide page 104 et seq.

ought not despair of affording considerable advantage under the most unpromising and even hopeless appearances by a due perseverance in a course of calomel judiciously blended with the other remedies treated of, according to the particular circumstances of every individual case.

The blue pill made with turpentine would be a good preparation if it could be depended upon; but it is liable to so much variation of strength that I never use it; nor have I tried the Hydrarg. Muriat. as recommended by Dr. Cullen, though I am disposed to judge favorably of it on so high an authority: in solution, however, it is extremely nauseous, and without great care it is very apt to disorder the bowels in a solid form.

Blood letting. To lay down V. S. among the remedies for the cure of this disease may appear inconsistent with the general principles held out; but however this may be, cases will sometimes occur where it may be absolutely necessary, and where the safety, nay even the life of the patient may depend upon its timely use. Nor will it be found contradictory on due consideration to the general plan recommended. Such are the causes by

which the distribution of the blood through the body are influenced, that the best and most judicious practice often requires the abstraction of blood from certain parts, while we are giving tone and perhaps stimulus to other parts, and to the whole habit. Certain cases of apoplexy, asthma, congestions in the liver and other abdominal viscera, and of passive inflammation, furnish examples of this. While we are removing the local congestion or accumulation by topical, and perhaps general venesection and purgatives, and thus giving the vessels an opportunity of recovering their contractility, it is perhaps necessary to give strength and energy to the whole habit by means of bark and other tonics, and to apply local stimulants.

In like manner such is the congestion and accumulation of blood in the right side of the heart and in the head in some cases of hydrothorax, owing to the interrupted circulation through the lungs, that this operation may be absolutely necessary to prevent suffocation. This will be more especially necessary, if, together with a livid swollen aspect, extremely difficult respiration, and great distention of the jugular veins, and those of the hands and wrists, the pulse

be full and hard, with strong palpitation of the heart. A small quantity at a time will be found sufficient; for very few hydropics will bear the loss of much blood. The repetition will be according to its effects in relieving urgent symptoms, in reducing the force of the circulation and the bodily strength. The appearance of the blood will seldom afford any just criterion to judge by, for how full soever the pulse may be there will be little or no buff on its surface, but the contrary, its texture being generally loose, as was observed in case 47. Had the lancet been used earlier in this, and afterwards repeated, and had the patient conformed more strictly to the plan recommended, there were grounds for hoping the event might have been different, or at least that in this as well as the other cases where the pulse was very full and hard, life might have been prolonged by occasional bleedings. But when these occurred to me I was not aware, or did not recollect, what Hippocrates, and other celebrated writers had said on V. S. otherwise would have used the lancet with more freedom. Their remarks and cautions are so much to the purpose that I shall transcribe them in this place.

" Si hydropicus difficulter spiraverit, et tempus vernum fuerit, et simul ætas viguerit et virium robur adsit, de brachio sanguinem oportet." Hippocr. de diæt. acut.

" Vidimus hydropen viginti curatum venæ sectionibus, qui ab exhibitis hydragogis et diureticis, cujusvis generis, magis ac magis intumuerit." Sponius aph. Nov. Sect. v. 87.

" Hydropen anasarca per V. S. curare quandoque opus est. Si jecur non solum, sed et lien ac ventriculus tumorem ac duritiem habeat, confidenter educ per exiguas missiones sanguinem, tantoque id magis, si vires non prohibeant, et copia sanguinis in venis manifesta, et ægrotus in flore ætatis constitutus sit, nec tempus anni magnum frigus afferat." Alexandr. Trallian.

" Curantes initium facimus in anasarca ab evacuatione per V. S. maxime si ab hæmorrhoidum, aut menstruæ purgationis suppressionem conflata fuerit affectio." Paulus Ægineta Lib. iii. cap- 48.

" In leucophlegmatia et anasarca, si status adsit plethoricus, atque ab asthmate sanguineo hæc mala præcipuam duxerint originem. Venæ sectionem ad curationem momentum afferre."

Hoffman, Med. Rat. vol. vij. p. 453. et seq. De hydrope.

In Homes clinical experiments* a case of dropsy is mentioned where the patient was cured by seven bleedings in the course of eighteen days.

There can be little doubt therefore that circumstances will sometimes occur where bleeding may be practised with perfect safety and advantage.

If there be a violent cough with expectoration of blood, a full hard pulse, great dyspnœa, and more particularly if the strength has not been much reduced a vein may be opened without hesitation, with every prospect of immediate relief.

In a few happy instances the cure may be said to be completed after the water has been evacuated. In by far the greater number, however, the most important part of the work remains yet to be performed. The practitioner will have the mortification of seeing it again accumulate, probably in no long time after withdrawing his remedies. Hence the necessity of nice and accurate discrimination in ascertaining all the causes and circumstances

* P. 346. see also Appendix No. ij. case 5.

connected with its effusion, since the ultimate success will greatly depend upon the skill and judgment displayed in adapting the curative means to the removal of these after they have been discovered.

If there be no reason to suspect a fixed disease of any organ, that weakness and relaxation of the solids, and its usual concomitants, tenuity of the blood, are the only remaining evils to contend with, the judicious application of tonics and diuretics, together with appropriate regimen should be persisted in with unremitting attention till the general strength be restored. The tonics which appear suited to this disease are few. Those to which I have given a preference are the light infusions of gention, or colombo, in combination with steel and myrrh as in No. 8 and 9.

When there is a hard dry cough with viscid expectoration, the vegetable decoctions and infusions are scarcely admissible. Steel and myrrh, however, in conjunction with the balsams may be had recourse to with advantage.*

* No. 12.—℞. Tinct. Benz. C. gtt. 40 ad 60 vel Tinct. Tolut. ʒi. cum muc. G. Arab. q. s. redact. Myrrhæ gr. x. Aq. M. Pip., ʒi. Sp. Æth. Nitr. vel Vitr. C. ʒi. Kali pp. gr. x. M. ft. haust. ter ind. s.

No. 13.—℞. Resin. Jalap. Calomelan. Zingiber. Pulv. aa. gr. ij. ad iv. Crystall. tart. Pulv. gr. v. ad x. Simul tere et Syr. Zing. q. s. ft. Bolus h. s. s.

N. B. This formula should have been inserted at p. 193 where reference is made to it.

These will indeed be found the best suited as tonics to all the circumstances and states of this disease. There are a few cases, however, or rather stages in which experience has enabled me to ascertain they ought not to be given. In those habits where the complexion was of a dark red before the attack, where now it exhibits a dark livid or purple hue, where the hands, legs, and feet are livid, and the latter probably hard and tense, and the veins appear distended with black blood, tonics of every description will prove injurious till these symptoms have been removed, which will sometimes happen when the water in the chest has been carried off, and the consequent interruption to respiration relieved. But as such subjects have been generally very corpulent before the disease, and often continue so after the water has been removed, the complexion and of course the blood remains of a dark red colour, a state which, there is reason to believe, is not favorable to the exhibition of the preparations of iron. If they should not succeed the mineral acids, especially the nitrous acid, may be tried with the probability of advantage.

In circumstances the reverse of those men-

tioned, when the complexion is unusually pale, the blood is thin, poor, and small in quantity, the whole body is much reduced, and the skin of the anasarcous limbs, if there be any swellings, is soft, smooth, pale, or transparent, readily receiving and retaining the impression of the finger, and where probably profuse hæmorrhages have contributed to the production of the disease, Steel medicines will prove highly beneficial, and should therefore have a decided preference over all others of this class. It is to be remarked that in all cases where the action of the heart and lungs has been much interrupted by the pressure of the water, the complexion is more or less livid and the venous blood is dark; but as soon as the pressure is removed and the blood circulates with freedom, both will assume their characteristic paleness in such delicate subjects, and this medicine may be used without hesitation.

The best preparation is the *ferrum Vitriolatum* decompounded by the *Kali pp.* conjoined with myrrh in the form of pills.* The ingredients should be minutely divided and incorporated so that the iron may be completely dis-

* No. 9.

engaged and the acid unite with the alkali to form a *Kali Vitriolatum.*

This compound, which is now universally used in this country, and which appears to have been first introduced into notice by the late Dr. Moses Griffiths, is a valuable medicine, and possesses advantages in this form which no other præparation of iron does. The saline impregnation tends to promote the urinary secretion, to keep the body open, and to allay those febrile irritations under which it is sometimes necessary to prescribe this medicine, and which other tonics generally encrease. It is so extremely nauseous, however, in the form of mixture, especially with the addition of myrrh, as recommended by Dr. Griffiths, that I very seldom prescribe it. The water of crystallisation soon evaporates during the rubbing, so that the ingredients incorporate very readily into pills.

There is something peculiar in the operation of the preparations of iron, which renders them better suited to certain morbid states of the constitution than other tonics. When we wish a sudden change to be made on the solids, comprehending the muscular and nervous parts of our frame, with the view of prevent-

ing the return of an aguish paroxysm, that of certain other affections which come on periodically, or of stopping the progress of mortification, the different kinds of cinchona are the best substances yet known suited to answer our views; but where a slow and gradual change is to be effected both on the solids and fluids, as in chlorosis, various other instances of cachexia, even in the debility remaining after different acute affections, as well as in that of which I am now treating, though they are too frequently resorted to, are nevertheless very ill calculated to attain the ends proposed. Unless a certain quantity of the bark produces these changes speedily it will be vain to persevere in it for a great length of time; and indeed it often proves injurious by laying the foundation of those visceral obstructions and indurations consequent upon long continued agues that are said to have resisted the use of the bark. It should therefore be encreased to the fullest extent the stomach is capable of bearing, and unless it then succeeds in a few days, it will very seldom succeed at all.

The operation of steel medicines, however, is directly the reverse: they effect a slow and gradual change on the solids and fluids, by

encreasing the tone of the former, and enriching the latter and consequently rendering it fitter for the purposes of the animal œconomy. Hence the necessity of persevering in their use for some time before any material advantage is to be expected. It will be found more convenient to begin with a moderate dose and to encrease it gradually as may be found necessary.

But though I disapprove of the bark as a tonic in this disease I have thought the bitter infusions* either in conjunction with or without iron highly beneficial. By imparting their tonic influence to the stomach more quickly than iron appears to do, without any of the inconveniences attending the different kinds of the cinchona, and thereby encreasing the appetite, they may be had recourse to with every prospect of advantage in most of those cases for which steel is calculated, in combination with it and alkaline salts.†

* As No. 8.

† Here I may be permitted to remark that I have been in the habit of prescribing the oxyd or præcipitate of iron for several years with the best effects in certain cases and circumstances where the other preparations of this metal disagreed, or could not, from their nauseous taste, be administered. In many instances of chlorosis, for which this medicine approaches to the nature of what is termed a specific, I found, in delicate females with very irritable bowels, that the decom-

Opiates, When the cough is so extremely urgent, as sometimes happens, as to prevent sleep and to aggravate every other symptom,

pounded ferrum acted as a purgative, and could not be retained in such quantities as to do any good, that the common preparations were resorted to with no better success; and it appearing to me that the pills which are called Dr. Austins chalybeate pills, were an oxyd of iron, I prepared considerable quantities by dissolving certain portions of the *ferrum Vitriolatum* and *Kali pp.* in water, mixed them together, then passed them through filtering paper and dried the precipitated iron which remained behind for use. I first prescribed it both in pills, and suspended in a watery menstruum by means of mucilage, for the paupers who came for my advice, and furnished them with the medicine, preferring the latter form because it was more easily prepared. Finding it fully answered my expectations I recommended it to some medical friends by a few of whom it was used.

This medicine is particularly adapted for young subjects and children in all those complaints of cachexia and debility for which the preparations of iron have been found useful, except under the circumstances pointed out, from the great facility with which it may be administered. It is often extremely difficult, sometimes impossible, to persuade children to take a quantity sufficient to do any good, of the tonics or bitters, in ordinary use; whereas the dose of this medicine is so small, that it may be mixed in sufficient quantity in their food without detection, to answer all the purposes intended. I have frequently succeeded where there was reason to apprehend the child would have been lost without it. In rickets, in worms, in the incipient, sometimes in the advanced, stages of mesenteric obstructions, in those complaints of children accompanied with either internal or external glandular obstructions, anda tumid abdomen; in short in all complaints of debility where tonics are admissible, this medicine will be found highly useful. But where a diuretic effect is at the same time required, and there is a disposition to constipation the compound preparation may be preferable.

may be given with advantage combined with squills and other expectorants.

Dr. Mead mentions an inveterate case of ascites accompanied with tympanitis and a very acute pain in the right hypochondrium, which was cured by 40 drops of Laudanum, taken at bed time and repeated, *octava quaque hora*, after the usual remedies had failed.* After the water was evacuated, the styrax pill, peruvian bark, and chia turpentine were given to complete the cure.

The tinct. opii Camph. will be found a good præparation in such cases.

Elaterium, The various remedies and combinations of which I have treated having succeeded in answering all the purposes which could reasonably be expected, beyond my most sanguine expectations, I have very seldom prescribed this remedy, yet from the few trials which I have made I am inclined to think might be found useful in certain cases, cautiously administered in combination with other remedies, more especially in those in which the digitalis may have failed. In one instance of this kind, Mrs. Candlers case,† life appeared to have been protracted for a considerable time

* Vide Monit. et Præc. Med. p. 141. also Append. No. ij.

† Append, No. 1.

by the immense quantities of water which were carried off by the bowels every time it was given; but in this, Hoffman's judicious remark, that the water would accumulate more rapidly after drastic purgatives, was fully verified.

Gamboge may be rendered perfectly mild by minute trituration and union with the saline laxatives and diuretics already mentioned, and prove useful under circumstances of very great torpor of the bowels; but without such precautions, it ought to be rejected from the catalogue of remedies suited to this disease.

Paracentesis. This operation being almost the only resourse of the antients it was strenuously recommended by some and boldly performed by others; while a third class lamented and complained that the patient should be abandoned to certain death when he could be so readily relieved and cured by drawing off the water: a few, however, have condemned it from its proving either generally unsuccessful or fatal. Those who are desirous of knowing what has been said on this subject both by the antient and some modern writers, will meet with curious and interesting infor-

mation in Hippocrates,* Bianchi,† Senac,‡ Morand,§ Du Verney,‖ La Motte,¶ Barrere,o Hoffman,:: and others who have written fully upon it.

From what has been said in the preceding observations it will not be expected that I should be an advocate for this operation when the water can be so readily removed in almost every instance by the means recommended. A few cases may occur, however, such as when the water is contained in a sac, as in case 39, and in one mentioned by Hoffman* in which he laments the operation was not submitted to; or when there is reason, from the preceding history, to suspect the fluid is thick, of a gelatinous or purulent nature, where its absorption may not easily be accomplished, in which it may be necessary to call in the aid of surgery to draw it off.

I have thus laid down the general indications of cure in this formidable disease, and

* De Morbis Lib. II. cap. xxiv. Chart. Tom. vij. pag. 576.

† Histor. Hepat. T. i. p. 662. ‡ Traité de la Struct. du Coeur T. ii. p. 366. § Mem. de l'Acad. de Chirurg. T. ii. p. 547.

‖ Acad. de Sciences L' An. 1703 Mem. p. 199. ¶ Traité compl. de chirurgie, T. ii. p. 189. o Obs. Anat. pag. 99.

:: Vol. vij. p. 473. * Ibid.

pointed out the means by which these might be fulfilled; and have judged it necessary not only to enter minutely into the history of particular remedies, but to give the formulæ or combinations in which they were found successful. While this last is intended more immediately for young practitioners, it is hoped men of experience may derive some useful hints from it.

To lay down such minute rules as will apply to every individual case which may occur is extremely difficult if not impossible. The kind, combination, and doses of medicines, the intervals of repetition, and the length of time they are to be continued, must necessarily be left to the judgment of the practitioner. Hence the results of the same mode of treatment in this and other diseases will be different under different medical men.

The author is encouraged to hope, from what he has advanced in the foregoing pages, that the practioner will seldom be at a loss; and rather than dwell any farther on this part of the subject, he begs to refer the reader to the cases in Appendix No. 1. more especially those which occurred in his practice since the year 1796, in which it will be seen the principles he has

recommended are successfully applied in practice.

One of the principal difficulties he has had to contend with was to persuade the patient that the cure was not completed and that another disease yet remained after the water was evacuated. Finding himself relieved from all his sufferings, one or more relapses was sometimes necessary to convince him that he must conform strictly to a proper course of medicine and regimen afterwards to ensure lasting benefit. Some of those whose cases are annexed, and who ultimately fell victims to the disease, might, he is confident, be now numbered among the living, and the lives of others protracted, could they have been prevailed on to attend to the restrictions enjoined, or to abandon the career of intemperance which gave rise to the disorder.

I now come to the consideration of a part of the subject which I deem of the first importance in all chronic diseases, but which is often but little attended to, namely, regimen.

SECT. IV.

Regimen.

1. Diet. Though in many acute diseases, success may depend in a great degree on the judicious application of active remedies, yet in by far the greater number of chronic ailments, medicine derives infinite advantage from an appropriate and judiciously regulated regimen. The valetudinarian; he whose constitution has been broken down by a career of intemperance, or by repeated attacks of disease, and who is perpetually assailed by a variety of chronic affections, may derive occasional relief from medicine; but he deceives himself if he look for permanent health without rigid attention to suitable regimen. In the disease of which I am now treating, this will be found particularly necessary.

That food which contains the greatest quantity of nutriment in the smallest bulk, and which requires, at the same time, the least effort of the digestive organs to convert into animal juices, reason and experience point out

as the best in this disease. While former habits must to a certain extent be suffered to influence the choice, light animal food in a solid form, or, under extreme weakness of the stomach, its simple essences in the form of soups or broths, will be found the best suited to the generality of cases and constitutions, when the presence of fever or other accidental circumstance, does not forbid its use.

Meat preserved in a cool temperature until it becomes perfectly tender, is much higher flavored, easier of digestion, and consequently more nutritious than when dressed early: this is well known to the epicure; and so convinced I am of it from ample observation, that to my dyspeptic patients I lay considerable stress on it. I have known instances of dyspepsia arise from the food in daily use consisting principally of meat that had been recently killed, and eat without due mastication, in persons engaged in active occupations, who do not allow themselves sufficient time at their meals; as well as in those who have had the misfortune of losing their teeth at an early period of life; and the cure has been greatly facilitated by the use of meat made tender by long keeping, assisted by diligent mastication.

When the powers of digestion and assimilation are weak, and more especially when, with this, there is general debility, every auxiliary ought to be called in. I do not mean to infer that meat thus kept acquires any additional nutritive properties; I only wish it to be understood that by being in a state more readily acted on by the solvent powers of the gastric fluid, it will be more completely converted into animal juices, and that the habit must necessarily receive a greater supply of nutriment, with less exertion of the stomach.

The flesh of animals that have attained their full growth and maturity contrary to the commonly received opinion, especially beef, mutton, venison, and game, yield much more nutriment, and are easier of digestion, than that of young. Roasted meats, there is reason to believe, are lighter than boiled; and the more they contain of the animal juices, the more nutritious. When, by over-roasting, these are evaporated, and the fibre is dry and hard, it becomes proportionably less nutritive, and requires a more vigorous stomach to act on it. Hence meat *under done* claims a decided preference. Pork and veal are only adapted

to strong healthy stomachs, whose gastric juices possess active solvent powers.

It is supposed by many eminent practitioners that the gelatinous or coagulable parts of animals, extracted by boiling from the ligamentous and membranous portions of their bodies, are the most nutritious: hence they have been generally preferred in circumstances of debility, more especially of the organs concerned in digestion. This opinion has long appeared to me to be erroneous. That these substances, whether they be used in their solid, or gelatinous state, are lighter, and more readily assimilated, and converted into animal juices, and that for this reason they are better adapted for weak delicate stomachs, which are incapable of digesting the more solid, and stimulating parts of the flesh of animals, I readily admit. But if we wish to place the constitution in the most favorable state for performing long continued laborious muscular exertion, we shall not, I presume, advise a course of animal gellies or the substances from which they are extracted, but the muscular parts, so prepared that the nutritive juices are not evaporated or exhausted. This fact is

well known to those who are employed in training persons for walking or running considerable distances in a given time. They will allow their patient no other food than beef steaks at all his meals, with no more liquid than is necessary to their proper and ready solution in the stomach, consisting generally of porter or ale, as being at the same time highly nutritious.

For these reasons then in this disease, and indeed in all chronic affections, as soon as the stomach is capable of receiving solid food, I recommend a diet consisting principally of the flesh of animals that have attained their full growth. It has this advantage too, that by being gradually dissolved in the stomach, assimulated and conveyed to the blood, its effects are more durable; whereas when gellies or broths are used, by being quickly imparted to the circulating mass, their effects are very transient; and a sense of faintness and sinking comes on when the stomach is empty, which requires a frequent supply; but from their viscid glutinous qualities the consequences too often are, that they either clogg the stomach, disorder the bowels, and by keeping the vessels in a state of perpetual distention, dispose so

much to inordinate biliary secretion, as to prove extremely injurious.

The food should be well masticated, and the free motion of the diaphragm never interrupted by a full meal. I am not however an advocate for the practice of, "eating a little and often," so universally inculcated, as well by medical men, as by nurses and many others, except under certain limitations and restrictions. I have repeatedly observed serious inconvenience from it. Under circumstances of general debility the quantity of food introduced into the stomach at one time should never be so considerable as to occasion a sense of weight or oppression; and if solid, by diligent mastication, it should be divided, and subjected to the salutary influence of the saliva which is undoubtedly a powerful auxiliary to the gastric, and other juices it meets with in the stomach and *P. V.* The sensations of the patient will be the best guide, and not the arbitrary injunctions too generally imposed by the practitioner. While the stomach feels full and oppressed, without any inclination for food, it may be inferred that it is not in a fit condition for receiving or digesting any. Agreeably to a general law of muscular ac-

tion, the stomach, which may be said to be a hollow muscle, should be suffered to empty itself at certain periods, so as, comparatively, to be under little or no exertion or distention, in order to fit it, like other muscles, for its healthy functions. If after the food has passed the *P. V.* the inclination do not again return, it will be vain, nay it will be defeating the real intention, to throw any more into the stomach. Nature will in this instance, as on other occasions, be the best guide. If this organ be kept continually more or less on the stretch by the introduction of some article of food, be it ever so small, every hour or half hour its powers will be weakened and the gastric fluid will possess little activity. In general, the best rule will be, to eat only when hungry, or when inclination prompts to it.

Vegetables of every kind should be sparingly used; and such as are of a cold flatulent nature should be entirely rejected. The farinacious vegetables, especially rice, may be fully allowed.

2. Drink. The advantages of free dilution in dropsy have been already mentioned. As soon as the cure has been attempted by the means, and on the principles recommended,

the quantity of liquid usually drank should gradually be encreased. The kind or quality, however, should be such as is known by experience to be readily determined to the urinary organs; yet, if possible, such as is at the same time grateful to the stomach, and not of a cold, debilitating, or relaxing nature. On these grounds, therefore, and for the reasons already fully stated, I never give my sanction to the use of beer or porter. In all diseases of languid or defective absorption, or secretion, or where there is any tendency, either from these or other causes, to glandular obstruction, I am convinced of their pernicious tendency from ample experience. But the interdiction is often unnecessary; for many of my patients who were so extremely partial to their home brewed ale, that they fancied they could not live without it, have declared that they have long been obliged to discontinue it in consequence of the sense of oppression it occasioned about the stomach, or to use their own words, "because it blows me out so."

If the food consist of solid nutritive, chiefly animal substances, all that will be required in the generality of instances, if the digestive organs be not very considerably weakened, is

watery drinks to dilute and convey it to the circulating mass. But if the stomach have been accustomed to the free use of strong stimuli, more especially if its tone have been materially injured and the disease induced by their unbounded use, it must be gratefully stimulated by a glass or two of old generous wine, such as madeira, sherry, or hock.

In the Edinburgh Infirmary a very excellent plan has been for some years adopted in dropsical cases. As soon as the cure has been attempted the patient is allowed to drink freely of whiskey punch, from a quart to four pints a day. This is I believe, usually audulated with lemon juice. I generally direct cream of tartar in preference, and a portion of sliced ginger to be added as in No. 5. To those who have not been accustomed to spirits, wine will be more grateful.

Certain native mineral, and especially chalybeate, waters are peculiarly adapted to dropsical patients; while they impart a grateful but gentle stimulus to the stomach they determine in a powerful degree to the kidneys and other secretions also; and when they can be had at the fountain head may be used with

freedom;* but as the elastic gases, on which their virtues partly depend, evaporate by keeping, they may be well imitated by art. The soda and artificial seltzer water prepared by Schwepp; or that prepared in the common apparatus, with a small portion of the fixed vegetable or fosil alkali may be substituted with advantage. A small quantity of iron may be added or not as may appear necessary.

The virtues attributed to certain waters, I am persuaded, depend solely on their purity; for the more they approximate to a simple elementary body,or the less earthy or other extraneous particles they contain, the more readily are they taken up by the lacteals, and the more quickly determined to the kidneys and other excretory vessels. It is highly probable that to this circumstance the efficacy of the Bristol water is chiefly to be ascribed, if any efficacy may truly be ascribed to it, as has of late been ascertained with regard to the

* On this subject Dr. Saunders' valuable work on the medical powers of mineral waters may be consulted with infinite advantage. The Sedlitz, the Caroline or Carlsbad waters in Bohemia were celebrated in the cure of dropsy by Hoffman on account of their diuretic and aperient qualities. vol. vij. p. 449. Some of these encrease perspiration as well as all the secretions

Ilkley spaw. This spring so long celebrated for the cure of various disorders has been subjected to chemical analysis by Dr. Mossman, and found to differ from common water only by being much purer or more free from heterogeneous earthy particles. Large quantities of these waters drank at the spring have been found to promote in a remarkable degree the urinary secretion; and on the same principle that they possess these effects it may, by parity of reasoning, be concluded that they pervade in a similar way the other minute secretory vessels also, since it is known that no ingredient either in a simple or compound state, enter their composition likely to possess any specific effects on the kidneys. Hence their virtues also in schrophulous and other glandular affections. Either of these diluting substances, therefore, may not only be freely indulged in during, but likewise between meals. From the prejudice which still too generally prevails against the frequent use of liquids in dropsy, sometimes from the uneasiness occasioned by distention, I have often found it difficult to prevail on the patient to drink the quantity which was judged absolutely necessary, experience having already assured him that "the

more he drank the more he filled" or encreased in size; and it is not easy to convince him to the contrary. To my great disappointment I have often found on my second visit to the patient that my injunctions had in this respect been totally disregarded.

As soon as the water has been evacuated the patient should return gradually to his ordinary quantity of liquids.

3. Exercise. Before the evacuation of the water the patients situation seldom admits of much bodily exertion. Much however may be done by the diligent use of the flesh brush, or by friction with flannel all over the body, but especially over the chest, as near the seat of the complaint as possible. Beside exciting and preserving a comfortable warmth in these parts they prove excellent auxiliaries in promoting lymphatic absorption, and general circulation. They should be used at least every evening and morning: to the feet and legs much oftener, these parts being in general cold from the languid circulation of blood through them.

As soon as the evacuation of the water or the relief of urgent symptoms will permit, no day should elapse without the patient either

walking, riding on horseback or in an open carriage. The frequent but gentle agitation of the body, and the moderate exertion of the muscles, together with the salutary influence of a pure healthy atmosphere assist greatly in giving tone, vigour, and energy to the whole frame. The lungs of some persons under hydrothorax are extremely susceptible of a cold frosty air; it being no sooner respired than they are seized with a cough and wheesing, and experience a painful sense of constriction about the chest. Under such circumstances it will be better to keep within doors.

To the steady uniform perseverance of the subject of case 18 in the regimen laid down, is his recovery as much to be attributed as to medicine; and many of those whose cases are recorded, now numbered among the dead, might have experienced similar benefit had they conformed to the restrictions enjoined.

The general coldness of the bodies, the languid circulation in the extremities, of dropsical subjects, and the total want of perspiration, point out the necessity of warm cloathing. Flannel should always be used next the body; and thick woolen or worsted stockings will be found indispensably necessary, sometimes even

with the addition of flannel socks, in order, if possible, to preserve an uniform and permanent warmth throughout the body. My patients have repeatedly expressed the great comfort they experienced from the change it was invariably thought necessary to make in their dress, especially in winter.

There is no case in which a flannel covering is so strongly indicated, is so beneficial, and so grateful to the sensations of the patient as dropsy, especially that of the chest, in which intense coldness, and languid circulation of blood in the lower extremities exist in a greater degree than in any other.

In short every means which experience has sanctioned as likely to give strength and tone, and to keep up a vigorous circulation and absorption, should be diligently practised not only under the disease, but for ever afterwards, if the enjoyment of permanent health be looked for.

Having now finished what I have thought necessary to say on the cure, I have no hesitation in affirming that if the general plan which experience has enabled me to recommend, be directed with skill and judgment, scarcely a case will occur in which the water

may not only be evacuated, but a permanent cure performed, if the constitution be not already nearly exhausted by the causes mentioned, or if the disease do not proceed from certain morbid alteration of structure, hitherto found to be beyond the reach of our art.

Of Ascites, Encysted dropsy, Anasarca and all other kinds of dropsy.

Although the foregoing observations have been confined chiefly to dropsy of the chest, yet the principles and the practice inculcated, will be found to apply alike to every species of dropsy, and with success to the greater number.

Ascites, and encysted dropsy, acknowledged to be the most difficult of cure, will generally yield to them in the early stages, and often when far advanced and confirmed. When in ascites the abdomen is considerably distended, (a circumstance which ought never to be suffered) as the difficulty of evacuating by the natural outlets will be proportionably encreased, the water should first be drawn off by tapping, and the cure by medicine attempted immediately afterwards. The absorbents will be acted upon at this time with more facility than at any other period

In encysted dropsy and ascites a combination of calomel, squills, digitalis, and crystals of tartar, as directed in No. 4, 5, and 7, persevered in for a great length of time, until the mouth be fully affected by the mercury, will ensure the best chance of success; but in these kinds, more perhaps than any other, the difficulty encreases with the disease; and no reliance is to be placed on the foxglove alone in either, though it is more than probable that it assists materially the salutary operation of the other remedies. Two cases 5 and 6* of ascites combined probably with encysted dropsy are inserted in Appendix No. 1. in order to shew the efficacy of the combinations recommended, without the aid of digitalis. They occurred early in my practice, in the year 1792, before I was in the habit of prescribing this herb regularly, and before I had much experience in dropsy.

* One of the patients is now living and in good health; and the other was well a few years since; of late I have not heard of her. Sept. 1808.

SECT. V.

Conjectures and observations on the mode of operation of the foxglove.

In order to advance our knowledge, and to form a correct judgment on this subject, it seems necessary, first, to point out its obvious and sensible effects on the body :

Those which I have observed are as follow,

1. *On the head or sensorium.* Vertigo or giddiness, headach, or throbbing of the temples, forehead, or in the bottom of the orbits; stupor, sometimes delirium, or interruption of the intellectual functions; imperfect or depraved vision.

2. *On the heart, arteries and vital organs.* Reduction of the number of contractions of the heart. and consequently of the pulsations of the arteries; frequently an intermission, irregularity, sometimes an encreased quickness of the same, with diminished force. Relief at times of difficult, spasmodic breathing and cough.

3. *On the stomach.* Nausea, sickness, and vomiting of the most distressing kind, being usually accompanied with a peculiar faintness,

and sense of sinking, expressed by the patient, "as if his life were going," different from that experienced from any other substance; sometimes copious watery discharges brought up without sickness or effort to vomit.

4. *On the bowels.* Under certain circumstances very profuse watery evacuations, without pain or griping, but with greater and more sudden prostration of strength than happens from the most drastic purgatives.

5. *On the secretions, excretions, and absorbents.* Encreased flow of urine, sometimes very suddenly and profusely; also of saliva, under the same circumstances which determine its operation on the bowels, namely in dropsical affections; under others, no sensible effect, either on the kidneys, bowels, or salivary glands, in the largest doses; that is, when there are no watery accumulations. Restoration of the functions of the absorbents, when impaired from certain morbid causes, as in many instances of dropsy; but no sensible effect upon these vessels when impaired by others. Probably diminished exhalation of serous fluids into cavities in dropsy; but no positive evidence of this.

6. *On the general habit.* Great languor,

weakness, faintness, coldness, and cold colliquative sweats.

These were the common effects observed from full doses of this herb in the various diseased states in which it was prescribed, which varied in degree, according to the disease, the constitution, and the quantity administered. It was never tried on healthy subjects in order to ascertain its effects. Its constant effects were those on the head, heart and arteries, stomach and animal functions, which will occur under all circumstances, in health as well as disease; whereas those on the secretions and excretions will arise only in particular circumstances, namely, when watery fluids are preternaturally effused in cavities.

So contradictory and opposite do these effects appear that, as might be expected, the opinions of medical men are no less at variance as to its mode of action on the body. This will be best shewn by bringing into one view the sentiments of the principal writers on the subject.

Thus Dr. Darwin; "This medicine" meaning the foxglove, "by stimulating into inverted action the absorbents of the stomach, encrease

the direct action of the cellular lymphatics." Art. iv. 2, 3. vol. ii. p. 718.

"From the great stimulus of this medicine, the stomach is rendered torpid, with consequent sickness, which continues many hours, and even days, owing to the great exhaustion of its sensorial power of irritation; and the action of the heart and arteries becomes feeble from the deficient excitement of the sensorial power of association; and lastly the absorbents of the cellular membrane act more violently in consequence of the accumulation of the sensorial power of association in the torpid heart and arteries, as explained in Suppl. i. 12. p. 719." And farther,

But there is reason to believe, that the stronger emetics, as digitalis, first stimulate the absorbent vessels of the stomach into greater action, and that the inverted motions of these absorbents next occur, pouring the lymph, lately taken up, or obtained from the other lymphatic branches into the stomach." p. 740. Art. v. 2.

And end of the same paragraph,—"While the action of vomiting from digitalis is owing to deficiency of sensorial power, which is pre-

viously exhausted by the excess of its stimulus." p. 741.

"Digitalis, in carefully regulated doses," says Dr. Beddoes, "that is, so administered as not to induce sickness or languor, very regularly encreases the momentum of the blood. In this view therefore it is contrary to a *sedative*. Of the fact here stated, I think myself more certain for the following reasons. It had long, (as I have publicly stated) appeared to me practicable to acquire measures of irritability and sensibility, particularly of the former. I supposed that an instrument might be so constructed, as when applied to some artery, to shew the force of its stroke." See to the end of the two next sentences, after which he thus proceeds; "Having observed how greatly the appetite of many phthisical patients encreased under the use of simple digitalis, I have given it in several cases of dyspepsia, and with the best effect. The appetite having encreased in these cases, and the symptoms of indigestion having disappeared, I conclude, without imputing to it superior qualities of this kind, that digitalis will encrease the power of the stomach. In the production of languor, of excess of sensibility, headach, and bilious vo-

miting digitalis seems greatly to resemble opium. I have known digitalis occasion an encrease of the pulse from 76 to 120 with heat of the skin, and headach. In two instances I believed it to produce feverishness with a peculiar mottled appearance of the whole skin. In one person a sort of intoxication so repeatedly followed a dose of 14 drops of the Tincture, taken twice a day, for two or three days, that I could entertain no doubt as to the cause. If therefore I were to exhibit the Materia Medica on a map, I should represent digitalis as not merely touching on opium, but bordering upon it for some space. In another part it should be contiguous to the vegetable tonics or bitters." And farther,

"Whatever may be the justness of these ideas, I hope I have brought together enough to induce those to pause who may be tempted to argue from a decreased number of pulsations to a decrease of living action, and from this to the propriety of employing digitalis in the height of inflammatory orgasm. In pleurisy, if any one should be mad or wicked enough to forego the so certain resourse of the lancet in favour of the sedative virtues of digitalis alone, he would I apprehend, encrease the

disease, if he confined himself to moderate doses. If with digitalis, he employs copious bleeding, his practice will not admit of reasoning, as the benefit from the operation may mask the mischief from the medicine. Perhaps from the peculiar susceptibility of the system, this mischief will be more than may be apprehended from experience of states not inflammatory. It is possible that immense doses, by rendering the period of excitement evanescent, might produce the desired effect. On this principle, opium may be sovereign in pleurisy. But I know not who would feel himself justified in proceeding on such a principle. If any one bold enough can be found, it is fit that he be clearly given to understand what he is risking." On the management of consumption,

Dr. Drake in his very judicious remarks prefixed to the two interesting cases of Grimes and Marris does not positively say whether he regards it as a stimulus or as a sedative, yet when we consider the views with which he prescribed it, and the treatment of the patients in other respects, I am disposed to infer he considers it as a sedative.

"It has been lately maintained "says he" by the

most celebrated physiologists among whom John Hunter stands foremost, that pus is a secreted fluid, the consequence of certain diseased motions of the extremities of the blood vessels; it has been likewise ascertained, that hectic fever arises only from the matter of an open ulcer; that what is termed laudable pus, when secluded from the air, is neither capable of creating fever, nor, except by its gravity, can it irritate the parts on which it rests. When pus, however, is exposed to atmospheric air, it rapidly attracts oxygen; an acid of a peculiar kind is generated, and hectic fever, the effect of absorption of acrated matter is produced."

"Now as anulcer, of the lungs is perpetually exposed to a stream of air, and of course an ichorous poison is continually forming by the union of oxygen with secreted matter, an important curative process would seem to arise from promoting absorption so rapidly from the surface of the diseased parts, that the pus shall be taken up as soon as secreted, and consequently its combination with oxygen prevented. If at the same time the medicine employed to promote absorption should so powerfully retard the motion of the

heart and circulating fluids, that the irritating and morbid actions of the extremities of the blood vessels, and therefore secretion as its immediate effect, should be considerably diminished, if not altogether suspended, another most salutary purpose would be accomplished." Letter to Dr. Beddoes, Medical contributions, p. 480.

"A great difficulty," observes Dr. Ferriar, "respecting the theory of the action of digitalis, has often occurred to me, on this subject. While it lessens the frequency and quickness of the arterial contraction, it often encreases, at the same time, the secretion of the kidneys. I shall have occasion to mention some cases, in which these two operations were combined in a remarkable degree. I feel it impossible to explain this phenomenon at present. The diuretic power of digitalis does not appear to me a constant and essential quality of the plant; the power of reducing the pulse is its true characteristic. According to our general notions of therapeutics, these are contrary effects. To say that the action of the arterial system is *retarded*, and that of the absorbents *stimulated*, by the same remedy, is rather stating the fact in different terms, than explaining it. The

secreting vessels of the kidneys are, in general, affected by stimulants, which act upon the whole of the blood vessels; but it is conceivable, that a spasmodic state of the vessels secreting urine, or a diseased action in them, may be overcome by a remedy, which lessens the force of the general circulation, as, in either of the cases which I have supposed, the *vis a tergo* (as the physiologists of the last age termed it) must act as an irritating cause, constantly supporting the disease. This reasoning, I am aware, will only apply to certain states of the kidneys, and leaves many instances of the general problem unresolved." Essay on the medical properties of the digitalis purpurea p. 13. et seq.

" My attention was indeed first directed to the digitalis as a remedy likely to be useful in phthisis by its almost uniform effect of rendering the action of the arteries more slow than natural at the same time that it appears to *excite* that of the absorbents." Dr. Fowlers Letter to Dr. Beddoes, Med. contributions, p. 501. et seq.

The idea of its proving directly stimulant seems to have crossed the Atlantic, and to have obtained in America, as well as in this coun-

try; a circumstance not to be wondered at when it is considered how much the Brunonian philosophy has influenced medical theory as well as practice in that country. In an account of a singular dissection, with very ingenious remarks, by Geo. Lee, A.M. of Pensylvania, published in the London Medical Review for June 1801, p. 348, are these words, "Mercury, digitalis, squills, and even the contents of the absorbents, are all particular or specific stimuli to them."

These extracts, (and many more of a similar tenor might be adduced) will suffice to shew the unsettled and contradictory state of medical opinion on this subject;—that digitalis is considered as a direct and powerful stimulant by some, while it is viewed by others, as possessing both tonic, sedative, and stimulant effects, at the same time. Hence, in dropsy, it is administered from its supposed stimulus upon the lymphatics and kidneys; in hæmorrhage from its sedative effects on the heart and arterial system, in which, according to Dr. Ferriar, it is materially assisted by its diuretic, or in other words, *stimulant*, operation on the kidneys; in consumption by its *exciting*, by which it is presumed can only be meant *stimu-*

lating the action of the absorbents, and thereby promoting absorption, and at the same time, from its sedative power, retarding the action of the heart and circulating fluids.

From these directly opposite effects, the most important advantages have not only been looked for, but said actually to have been attained.

That the various effects mentioned are the result of the use of foxglove cannot be denied, but that they should be the consequence of a directly sedative, and stimulant operation, exerted at the same time, as the language just quoted obviously implies, appears extremely inconsistent. That any substance should be capable of producing two directly opposite effects on vessels, though different, yet obeying the same general laws, seems as contradictory to the rules of correct and sound philosophising, as it is to the known operations of the animal œconomy. In my opinion the synchronous existence of sleeping and waking, motion and rest, light and darkness, might as well be contended for: they are two directly opposite states which can only exist at distinct and different periods: the operation of a stimulus or a sedative is no less so.

As the only basis on which to build any thing like a solid chain of reasoning I hold it to be an indispensable principle, *that any substance which proves sedative, or stimulant, at one time, in any given dose, or on any one part of the body, must do the same at all times, in all doses, on every part of the body under similar circumstances.* Whatever therefore may be the operation of foxglove on the heart and large arterial trunks, it must necessarily be the same on their capillary ramifications, those of the kidneys and other glands, as well as the exhalants; on the absorbents; on the muscular fibre; in short, on all parts endowed with sensibility and irritability, which, however different their functions may be, act in obedience to the same general laws. Had this plain and apparently obvious truth been first admitted and settled, many of the volumes that have been written, and the thousands of frogs and other inoffensive animals that have been cruelly mangled and tortured, in order to establish the stimulant or sedative power of this or that substance, especially of opium, might have been saved. It has been said, and it is still strenuously maintained by certain medical writers, that opium in its primary operation is

invariably stimulant, and that the sedative effects attributed to it by others are the consequence of exhausted irritability from excess of stimulus, therefore secondary: and, unfortunately for their cause, the advocates of a primary sedative power, have committed themselves by the avowal that in *certain* doses, and under *certain* circumstances it is stimulant. By this admission, and by classing it under the head of *stimulantia*, as well as *sedantia*, the whole force of the ingenious reasoning Dr. Cullen has called to his aid in both, in my opinion, is destroyed. "It appears clearly," says he, "that the stimulant and sedative powers of opium operate at one and the same time; and in no instance more remarkably than in that of opium proving powerfully sudorific." Mat. Med. vol. 2, p. 198.

I shall here only observe that, notwithstanding the great number of able advocates in favour of the direct stimulant power of opium, I see no just grounds for altering the opinion I have long formed, of its proving uniformly, *directly*, and powerfully sedative; and that under this conviction I have always prescribed it*.

* The remarks of a learned friend, who has entertained similar sentiments, appear to me so just and judicious that I shall insert them in

Admitting then that the digitalis is capable of producing only one of these effects let us enquire to which class it strictly belongs.

The dominion it possesses beyond any other

this place. "In order to ascertain fairly," says he, "the specific powers of opium it ought to be applied to healthy subjects. Its constant effects would then be found to be, lessening all action and sensation, and inducing sleep." So it will, in my opinion, in disease, if its effects be fairly and impartially observed and recorded. "I deny," continues he, "that this happens; that opium induces sleep, or allays pain by any secondary, but by a primary operation. If it were secondary, the effect ought to be in proportion to the cause; the indirect debility should be found in exact proportion to the previous excitement which produced it. Hence a moderate dose causing sleep should be preceded by a lively paroxysm of intoxication and hilarity; a large dose, such as induces stupor, convulsion, or death, by outrageous and ungovernable excitement, however short its duration: but, in fact, neither one or other takes place. Opium allays cough, pain, and various inordinate actions, without inducing any manifest intoxication, or encreased vigour. In violent spasms and pain, opium may be given in very large doses without inducing sleep. After much experience in the administration of opium, it has never fallen to my lot to observe any intoxicating effect from it. I have known a degree of serenity and chearfulness obtained by the cessation of pain, or great irritation, by means of opium." Persons subject to a nervous depression of spirits, who have accustomed themselves to the frequent use of laudanum to remove it, and who are unable to go into company without it, experience this in a remarkable degree, bordering in some instances upon slight intoxication; which may be easily accounted for by the sudden transition from painful to pleasurable sensation. This will be observed to arise from the sudden relief procured by cold appplications in violent external inflammation, of which, I have no doubt, Dr. Kinglake could furnish many instances in gout, amounting even to intoxication. On the whole, I conclude with my friend, that the anodyne effects of opium is a primary, not a secondary operation.

known substance over the heart in retarding its action; its power in allaying certain painful irritations, in producing drowsiness, extreme languor, faintness and weakness; in lessening vital warmth, nervous and muscular energy, and all this without any previous mark of increased action, or stimulant quality, would seem sufficient to establish unequivocally its specific sedative powers. These are all obvious to the senses: the most attentive and accurate observer is unable to discover any previous state of excitement, which, if the opinions of Dr. Darwin and those who contend with him for a direct stimulant operation, were well founded, must be very considerable, and consequently so obvious as not to be overlooked; for, as happens from acknowledged stimuli, the cause, or the sum of excitement, must be exactly proportioned to the effect, or degree of exhaustion; in other words, the indirect debility, will be in proportion to the preceding stimulus, and the quickness of its action. And, let it be observed, that according to the opinion of Darwin and Brown, indirect debility cannot take place otherwise than as the effect of a prior stimulant operation. As happens with regard to other seda-

tives too, the heart becomes in a remarkable degree susceptible of the stimulus of the blood, and the whole body of other stimuli, when the foxglove is suddenly withdrawn, after the habit has been under its full influence; for the pulse sometimes rises from 50 to 80 and 100 in a few hours. But it will be asked how are its effects to be explained, in speedily, and profusely encreasing the flow of urine, and sometimes the alvine excretion, in dropsy, so as to empty the dropsical cavities sometimes in twenty-four hours: the solution of this problem may appear at first sight difficult; but if we should fail in proving by direct and positive evidence that it is by a similar sedative operation, it surely follows, agreeably to the principles laid down, that it cannot be by the opposite.

It has already been observed that the foxglove produced no sensible encrease of urine except in dropsical effusions; and it deserves to be particularly remarked in this place that none of the earliest writers upon it, nor indeed any before Dr. Withering, have made mention of it as a diuretic; and since it is well known that they made very free with it, and describe its other prominent effects, is it probable that

this very striking one would have eluded observation had it really occured? "It is wonderful," says Dr. Withering, "that no author seems to have been acquainted with its effects as a diuretic*." The same surprise has been expressed by subsequent writers in nearly similar words. To me it would appear wonderful if they had been acquainted with them. The reason they were not, is obvious, and tends, I think, not only to confirm the observations I have made, but the opinion I have ventured to advance, that it exerts no specific diuretic operation on the kidneys, namely, because they did not prescribe it in dropsy. Their trials were principally confined to epilepsy, consumption, scrophula, and foul ulcers, in which it is said to have worked wonders; but in which they found it, and it will be found by others, to produce no sensible encrease of the urine, except when these deseases were conjoined with serous effusion. Dr. Withering, therefore, was the first regular practitioner who discovered and made the world acquainted with its effects in encreasing the secretion of urine, because he was the first who prescribed it as a remedy in dropsy.

* Essay on digitalis purpurea, p. 10.

The observations of the writers of the present day, even of those who have had the most extensive experience of it, are, it is to be lamented, so loose in this respect as to furnish no data on which to form a decided opinion. Some of these indeed positively affirm that, in the diseases unaccompanied with serous effusion in which they carried it to the fullest extent, it produced no encreased flow of urine, and the silence of others on this head, while its common effects are mentioned, leads to the presumption that this did not happen: others, however, mention its having taken place, but in so vague a manner as to imply a suspicion of the accuracy of their observations. "This double effect," says Dr. Ferriar, (speaking of its action on the heart and on the kidneys) "however perplexing in theory, is extremely beneficial in practice: when it takes place, it adds in hæmorrhages, a mode of natural evacuation sufficiently efficacious to relieve without directly debilitating the system; and what is of the greatest importance, continually operating while we persist in the exhibition*." And in another place he observes; "I shall have occasion to mention some cases in which

* Essay on the Medical properties of Digitalis, p. 15.

these two operations were combined, in a remarkable degree*."

Had this excellent practitioner mentioned these cases, I should either have considered them as exceptions to a general rule, doubted the accuracy of my own observations, or perhaps relinquished my opinion entirely; but as my remarks were made on a considerable number of cases, and with the immediate view of establishing either the truth or fallacy of this question, it will not, I trust, be deemed too presumptuous to say that they are more likely to be correct than those of others which were not directed to the same object.

On the whole, then, I have no hesitation in concluding that the foxglove exerts no specific stimulus, either directly or indirectly on the kidneys, or any part of the urinary passages; consequently, that the extraordinary encrease of the urine which sometimes attends its use in dropsy, must be explained on different principles, and is referable to certain circumstances immediately connected with serous accumulation, such as have not hitherto been ascertained. The same may be said of its operation on the bowels. I have never ob-

* Essay on the Medical properties of Digitalis, p. 13.

served those copious watery evacuations, nor indeed any purgative effect, from the largest doses which were administered, in a single instance, except in dropsy; nor does it appear to have been productive of any such effects under the direction of others, except when the stomach was violently disordered by it, as happens from a variety of other substances, which are not in their nature purgative. If it possessed any direct specific purgative effect on the bowels, or diuretic action on the kidneys, surely these would appear at other times, especially when these organs were in a sound state and consequently more susceptible of its action, than when under preternatural torpor, as frequently happens in dropsy.

It deserves to be remarked, that when the habit was under its influence, the bowels were for the most part preserved in a natural or somewhat lax state, although before they were on one or other extreme. When there was colliquative diarrhæa, it checked it; when constipation, it removed it. In one case of encysted dropsy, accompanied with *schirro contracted rectum*, in which no natural evacuations had been procured for some years, the bowels were perfectly regular while the habit

was charged with it. This was repeatedly mentioned with great satisfaction by the patient as an extraordinary occurrence, and as in a great degree compensating for the distressing sickness produced by it. These apparently opposite effects only shew its extensive salutary influence in restoring the due harmony and equilibrium between the exhalants and absorbents, as well as the just degree of susceptibility to the muscular fibres of the bowels, on the loss of which these different states depended. In like manner does it appear more than probable that it acts on the absorbents and exhalants opening into other cavities.

Admitting then that it exerts no specific stimulant operation on the kidneys, or any other organ, on the heart and arteries, or on the muscular fibre, does it not necessarily follow, agreeably to the operation of medical agents on the living, irritable, and sensible fibre, and the known laws of the animal œconomy, that it can exert no such operation on any other part of the body? that consesquently it restores the impaired or lost functions of the absorbents, and places them in a condition of taking up and conveying to the blood, fluids effused in cavities, by no other than a direct

sedative operation. Were it necessary, a variety of arguments might be adduced in support of this opinion.

On attentively observing the particular cases and constitutions in which the digitalis acts speedily in evacuating accumulated fluids, it was evident that mere atony, debility, or torpor of the absorbents was not the sole cause of the accumulation, as most probably happens when the acrid and stimulant diuretics are successful. "It seldom succeeds," observes Withering, alluding to this herb, "in men of great natural strength, of tense fibre, of warm skin, of florid complexion, or in those of a tight chordy pulse. On the contrary, if the pulse be feeble, or intermitting, the countenance be pale, the lips be livid, the skin cold, the swollen belly soft and fluctuating, or the anasarcous limb readily pitting under the pressure of the finger, we may expect the diuretic effects to follow in a kindly manner*." These observations accord fully with those I have made: and it may be added, that it seldom succeeds in those of fat corpulent habits, with a dull sluggish inirritable fibre, especially if this state have arisen from the free

* Withering's Essay, &c. p. 189.

indulgence in beer dinking; while it speedily relieves those of weak, delicate, irritable constitutions, with a thin, soft, smooth skin, which in the anasarcous limb is transparent. These facts having been ascertained by experience, it is but reasonable to presume that the morbid condition of the absorbents should partake of the peculiarity of the constitution at large. A morbid sensibility and irritability are the characteristics of such constitutions. Now, if the absorbent lymphatics opening into cavities labour under a high degree of morbid sensibility and irritability, serous accumulation will be as natural a consequence as from mere torpor or debility, and digitalis from its peculiar sedative properties will be the natural remedy. The analogy of what occurs under similar circumstances in other parts tends to strengthen this opinion. Under certain degrees of encreased sensibility and irritability of the stomach, and P. V. substances which in health produced pleasurable sensation, now often occasion incessant sickness and vomiting, and the lymphatics opening into these parts either take up the fluids opposed to them very sparingly, or not at all. The peristaltic motion not only of the stomach but of the greater part

of the alimentary canal will be inverted. In many diseases the whole muscular system is agitated into convulsive, irregular, or inverted actions by the natural stimuli. Now, since it is found that it is under such circumstances, and in such habits this herb proves more particularly efficacious in dropsy, and that it often fails entirely where the acrid and stimulant diuretics prove successful, is it not reasonable to conclude, that the lymphatics are thus affected; that the natural stimuli, instead of exciting their healthy actions, and propelling their contents in the direction of their valves, all tend to the contrary, and that the digitalis, from its peculiar sedative powers, removes these morbid states, restores their healthy functions, or gives to them their due degree of susceptibility. The supply by the exhalants may be at the same time diminished, in proportion, at least, to the degree of sedative operation exerted on the heart and arteries, and consequent reduction of the impetus of the circulating fluids. "The operation of digitalis," says Dr. Mossman, "very certainly lessens the secretion by the *exhalant arteries;* but whether it affect the system of absorbents otherwise than by interrupting the farther sup-

ply of fluid, and leaving them at liberty to take up what is already poured out, demands I think a doubt*." Any person who has witnessed the sudden depletion of enormously distended cavities by means of this herb, must be surprised at so extraordinary a conclusion, obviously the reverse of what really happens. This circumstance too seems to furnish an insuperable objection to those who maintain that the lymphatics are mere passive agents, not *actively* absorbing in any instance, but "*passively* admitting the redundant, interstitial, or extravasated fluids *forced* into their permanently open orifices by arterial and muscular impulse†," since they take up and transmit much larger quantities of fluids than they ever do in health, when arterial and muscular impulse are considerably diminished by the debilitating power of the digitalis, and when they appear to derive little aid from any source except their own inherent action, which, in my opinion, proves them to be endowed with living active muscular powers.

The healthy functions of these vessels being thus restored, their action seems in many

* Essay on Scrophula, p. 84.

† See Med. and Phys. Journal, for December 1801, p. 457.

instances to be in proportion to the quantity of fluid opposed to their mouths, or to the duty they have to perform; for they now take up probably more water from certain cavities in twenty-four hours than they did in several weeks before when they had no more than the natural quantity to dispose of; and the effused fluid being once absorbed it will be conveyed to the circulating mass, and from thence to the kidneys, as the natural outlets; which process will be materially accelerated if the exhalants now transmit less than the quantity they did in health. In some instances, however, when there is considerable torpor of the kidneys, and the bowels are naturally very irritable, the water passes off in this way, producing copious liquid evacuations; or it is poured out into the stomach, and probably at the same time determined to the salivary glands, causing very profuse watery discharges from these organs; or if the digitalis be not assisted by stimulant diuretics it may be again effused as fast as it has been absorbed.

The salivation is of a peculiar kind, being unaccompanied either with the fætor of the breath, discoloration, pain, or swelling of the gums or salivary glands, loosening or loss of

the teeth, consequent on salivation produced by mercury. The saliva is either copiously thrown out from the salivary glands, or a similar fluid is thrown up in mouthfuls from the stomach, sometimes without sickness or efforts to vomit, as I have repeatedly observed while sitting by the patient. I have no recollection of observing salivation produced in any instance by digitalis, except where there was every evidence of watery effusion: when it happens the determination by the kidneys is always diminished.

In order farther to illustrate the apparently opposite and contradictory effects of certain substances, more especially of opium and digitalis, on the human body, it may be remarked, that different functions of the living system may be in different states, at the same time, in regard to excitement and action, and that the same substances may therefore seem to produce different effects on these states. In mania, for instance, the animal function of voluntary motion is often excited to four times its natural force, while the action of the heart and arteries is extremely reduced; and the sentient function of the nerves so far obliterated as hardly to receive any impression. It has

been found that the dose of near a scruple of emetic tartar has been given to a delicate female subject, without effecting the least operation on the stomach and bowels, and that active blisters have produced no sensible effect on the skin, while it required the exertion of several persons to hold her in bed. Something of a similar irregularity may be observed in hysteria, hypochondriasis, and melancholia. In acute rheumatism, and in synocha, while the heart and arteries act with an extraordinary morbid force, the patient is often so languid in his animal functions that he can hardly bear to be raised from his pillow without fainting. In the hysteric paroxysm the animal functions are often wholly suspended for sometime, while the patient still retains his usual colour, warmth, and fullness of pulse. The same apparently happens in apoplexy, and some instances of palsy. In inflammation the action of the heart and larger arteries is frequently encreased very considerably in force, while that of the inflamed vessels is *always* diminished*. There is sufficient evidence, therefore,

* This being contrary to the generally received opinion, it may be proper to remark, that I have for several years adopted the idea that the action of the inflamed vessels was invariably more or less dimi-

that the different functions may be in different conditions in respect to excitement and vigour,

nished, while that of the heart, large arteries, and arterial trunks immediately leading into the part affected, might either be encreased, or remain unaffected. Thinking this doctrine original I communicated the heads of it to professor Duncan, of Edinburgh, in 1793; requesting him to insert them, if not too late, in the next vol. of the Med. Comment., until I should have an opportunity of laying it before the public in detail, in a more finished form. In the answer with which he was so obliging as to favor me, after informing me that the greater part of the impression was printed off, he thus proceeds: "Had the article with which you favored me, arrived sooner, I must acknowledge I should still have had some doubts about the insertion of it, lest I should have been thought to give you the merit of an hypothesis really belonging to another. Several years ago, the opinion that inflammation is the consequence of debility, was strenuously supported in the Medical Society, by many young men, but particularly by Mr. Allan. Whether he still retain the same opinion or not I cannot tell; but it is now, I am told, almost completely deserted there. And before you publish on the subject, let me recommend it to you, to consider attentively the influence of topical stimuli, whether chemical or mechanical, as immediately inducing inflammation, and some of the most remarkable symptoms with which it is attended, particularly pain, heat, and local pulsation, where there is no encreased impetus of the heart or large arteries."

It is possible I may have received the first hint when at Edinburgh, in 1790, yet I have no recollection of any such opinions being current or supported in any of the Societies during my residence there, from 1780 to 1784, or afterwards in 1790. I am confident they were not; yet though I still considered this doctrine as my own, I thought it right to pause before it was ushered into the world, lest, as the professor very jusily observes, I should lay claim to an hypothesis really belonging to another. But though the publication has been delayed from causes unnecessary to intrude on the reader, the subject has not been abandoned, and subsequent experiments, facts, and observations, have tended to remove every doubt which then existed in my mind

and as this frequently occurs as the effect of disease, medicines which act on the habit at

relative to certain parts of it. My sentiments have been long known to my medical friends, and the M. S. has been submitted to the inspection of a few; but the objections urged by them, as well as by the learned Professor, have not only been anticipated by myself, but I trust satisfactorily refuted. It would far exceed the limits of a note to state the grounds on which my opinion is founded, much less all the arguments that may be adduced in support of it. I cannot however forbear remarking, that the phenomena of the disease, the exciting causes, and the means employed with effect in the cure, all seem to concur in proving the existence of diminished tone, energy, or contractile power of the vessels, both of active as well as of passive inflammation, though some of these appear on a superficial view to prove the contrary. If encreased action were the cause the very reverse of preternatural redness, congestion, distention, or encreased capacity of the inflamed vessels would be the case, especially in local inflammation, where no sensible change takes place in the heart or large arteries. But if the irritability or contractility of the muscular fibre of the minute inflamed arterial ramifications be diminished, these appearances will be the natural, and indeed, the necessary consequences, more particularly if the action of the heart and large arterial trunks be at the same time encreased: their coats will more readily yield to the distending impetus of the blood, or the *vis a tergo*.

The exciting causes are all such as either directly or indirectly diminish or exhaust the contractility of the muscular coat of the arteries, and thereby induce debility. Those which *directly* produce inflammation are all inordinate stimuli, either mechanical or chemical, which by their excess impair or destroy irritability; and those which *indirectly* do so are the ordinary or moderate stimuli suddenly applied after they have been for a certain time abstracted, producing precisely the same effects, of which alternations of heat and cold afford the best illustration.

The means which experience has sanctioned as the best for the cure are all such as are calculated to restore lost tone, or remove debility. Blood is drawn from the arm in order to lessen its impetus into the

large may appear to produce very different effects. Thus in acute rheumatism and synocha the action of the heart and arteries is weakened by bleeding and purgatives, while the animal, and most probably all the other functions are strengthened. In inflammation similar effects take place from the same means, while the impaired action of the inflamed vessels is sensibly encreased. It is not improbable, therefore, that the same may be produced by remedies which disorder the system; and that digitalis, in reducing the activity of the vital, animal, and natural functions by a direct sedative power, may bring the system to that state, in which we find, on other occasions, the functions of the absorbents to be encreased, and this seemingly by an inherent law of the animal œconomy not yet rightly understood.

distended and debilitated vessels; from the part immediately affected with a view of removing more directly the distending cause, and thus, in both cases, in order to give them an opportunity of contracting more readily on their contained fluids. Mechanical and chemical stimuli, astringent lotions, and tonics, are applied externally to the coats of the vessels in order to excite them to a more vigorous contraction; and cold in some instances with the view of abstracting the internal stimulus of heat as well as of restoring lost tone.

The encreased heat, pain, and local pulsation, appear to me to admit of the most satisfactory explanation, but having already extended this note beyond due bounds, the farther consideratson of the subject must be delayed till a future occasion.

It appears at the same time that when the action of the absorbents is so far restored as to drain any dropsical cavity of its morbid accumulation, this happening under a state of general debility, the water is not thrown off by perspiration which requires a state of general vigour to promote and support it, but by another law is determined to the next great outlet of watery fluid, namely, the kidneys. It seems indeed consistent with the laws of the human œconomy, that under an encreased activity of the heart and arteries, the fluids should be determined to the surface, and under the opposite state of languor and debility, to the kidneys. We find accordingly, an encrease of natural perspiration, concomitant on encreased circulation and vigour; an encrease of urinary secretion concomitant often on depressed spirit, and languor of body; at least it will seldom happen, that a copious secretion of urine will take place under a state of activity of the heart and circulation. When this occurs to hard drinkers, it is always during the debility of intoxication.

It is therefore a fact, that powers which weaken the animal and natural functions often have the effect of causing, at the same time,

an encreased flow of urine; and this last effect will be in proportion to the force and suddenness of the debility induced. This effect of the passion of fear is notorious and proverbial, as is strongly manifested in the case of the woman labouring under ascites who was terrified on a sudden, by meeting oxen on one of the London bridges: she ran back in consternation, and was presently obliged to squat down, before she could reach any house, and discharged gallons of water. If I recollect right, she obtained a cure by this means. Care, anxiety of mind, and depression of spirits, however induced, will be found frequently to cause a similar effect. In like manner, it will be found that some of the most active diuretics, as squills, elaterium, and digitalis, will sometimes not produce their full effect on the kidneys, until after the stomach has been affected by more or less of nausea and vomiting, with general languor and debility. Dr. Darwin seems to have been acquainted with these truths; but accounts for them in a whimsical and contradictory way. Dr. Ferriar is impressed with the same truth in the operation of digitalis, and is puzzled by it, as he candidly acknowledges. The fact

itself is important, as it bears on the administration of diuretic medicines. The explanation is another thing.

From the foregoing facts and observations I am induced to draw the following conclusions.

1. That the digitalis exerts no specific stimulant operation on the kidneys, stomach, bowels, salivary or mucous glands, or on any part of the body.

2. That consequently it restores the lost or impaired functions of the absorbents, and places them in a condition of taking up the fluids effused in cavities, by a direct sedative operation.

Whatever may be the fate of the opinions advanced in the foregoing section on the mode of operation of foxglove;—whether they be confirmed or refuted by future observations, it may be right to remark that the practical part of this essay will not be in any degree affected or invalidated: this rests solely on its own merits, the solid basis of an ample share of experience, uninfluenced by any theoretical speculations, except such as might arise out of the successful results of a great variety of

cases. But if in the first instance we should have no theory to direct our steps, and be fortunate in arriving progressively at successful practice, in diseases deemed for the most part incurable, by the aid of experience alone, it is surely but natural that we should begin to theorise on the *modus operandi* of the means by which so desireable an object has been attained.

CHAP. VII.

Of the salutary powers of Digitalis in other diseases.

AS far back as the year 1799, I hazarded the following opinion of this herb, "On the whole then, the foxglove will be found a valuable remedy in consumption. It will sometimes succeed when the most approved remedies fail. When of itself it is insufficient to subdue the disease, it will prove a valuable auxiliary to other means. It has always, with me, quieted and soothed the sufferings of the patient more or less; and where it ultimately failed it lengthened the duration of life, and smoothed the avenues to death." And in another place; "though I doubt not it will be found by others the most efficacious that has hitherto been resorted to, yet its powers are limited, even in the early stages*.

* Med. and Phys. Journal, p. 115, and 117.

Subsequent experience having enabled me to ascertain more fully, the extent of its powers, and to estimate more correctly its real merits, it is incumbent on me now to acknowledge that these will be found still more limited, that the expectations held forth above, though considered by many at the time as falling short of its real virtues, have not been fully realized. In several instances it appeared to have no effect either in arresting the progress of the disease or of palliating the sufferings of the patient. It will nevertheless be found a valuable auxiliary in many cases of consumption under the cautions and restrictions so fully laid down by different writers, as well as in the paper from which the above is extracted; but though it is in general to be regarded only in the light of an auxiliary to other means it should not be omitted in any instance, since, if it do not succeed to our wishes it will seldom, if ever, interfere with the salutary effects of any other remedy.

In the influenza or epidemic catarrh of 1802, it was prescribed on an extensive scale both by myself and many medical friends, with the most beneficial results, in those cases and stages where the cough was extremely

urgent, but in which opium is found to prove highly injurious. After the fullness and tension of the pulse, the heat and dryness of the skin, were lessened or removed by appropriate means, and none were found more so than moderate doses of calomel and James's powders, the tincture administered in the quantity of from sixty to a hundred drops in the day in combination with saline medicines, mild expectorants, and free dilution, its effects in allaying inordinate cough, pain and irritation of the lungs, and the febrile state attendant upon them, as well as in promoting expectoration, were very conspicuous. One of my medical friends of extensive practice assured me he used some pints of the tincture in this epidemic. In the secondary stages of the complaint when the patient was threatened with consumption, or when the complaint had been neglected or improperly treated, its virtues were still more evident; and I am confident many patients already labouring under hectic symptoms were rescued by it; while in others this state seemed to have been prevented by the timely but judicious exhibition of full doses of it. In this complaint it should be prescribed at once in such doses as will speedily

affect the habit, while in phthisis the exhibition cannot be too slow or gradual.

In pleurisy, pneumonia, and other inflammatory disorders, it has been strongly recommended as a substitute for bleeding and other evacuations, with a view of reducing the fullness, hardness, frequency of the pulse, and usual febrile symptoms; but I will venture to affirm that this has not been sanctioned by the practice of those persons who thus confidently recommend it, but that it has originated in a preconceived theory. Though I differ in opinion from Dr. Beddoes as to its mode of action, yet I cannot express myself in stronger or more appropriate terms on this occasion than in quoting his words. "In pleurisy," says he, "if any one should be mad or wicked enough to forego the so certain resource of the lancet in favour of the sedative virtues of digitalis alone, he would, I apprehend, encrease the disease, if he confined himself to moderate doses*." To this it may be added that the same objections will apply to all inflammatory affections, till the strength of the pulse, the heat and dryness of the skin, be reduced or removed by bleeding, or other evacuations.

* See p. 234, et seq. of this Essay.

This may appear to favour the idea of a direct sedative operation: the same, however, may be said with equal propriety of cold. In violent inflammatory disorders, especially in strong muscular habits, which have been suffered to continue till the inflammatory action be fully established, the application of cold, as well as of digitalis, will be insufficient to subdue it; and by trusting to either the patient may be lost. Nothing but the abstraction of the positive stimulus of the blood, or the reduction of this action by purgatives will in many instances save the patient; and it may farther be remarked that though under these circumstances the digitalis may prove injurious, or at least may do no good, yet in those where its virtues are obvious, stimuli in general will do harm, a strong presumption in favour of its not acting by a direct stimulant operation.

Cases of pleurisy or pneumonic inflammation will sometimes occur where the most copious evacuations by bleeding, aided by other appropriate means, will be found insufficient to subdue the urgent symptoms, yet in which the pulse and general strength are so reduced as to preclude farther evacuations,

though the blood still continue to exhibit a dense inflammatory buff. Such cases are extremely perplexing to the practitioner: they generally arise from the disease being neglected or improperly treated in the beginning, or from the inflammatory action being suffered to be fully established, concurring perhaps with peculiarity of constitution. The digitalis may be resorted to with advantage in such cases, and it will be assisted by small doses of calomel, James's powders, and opium, more especially if the surface of the body be hot and dry, the cough urgent, without expectoration.

In chronic affections of the lungs it will be found still more efficacious than in the secondary stages of acute ailments.

In asthma, chronic catarrh, and dyspnœa, incident to persons advanced in life, when the expectoration is viscid but copious, it will not only be found beneficial in relieving present symptoms, but in preventing remote evil, namely, serous effusion, which is always to be apprehended, without proper precautions in such circumstances. In spasmodic asthma, in hooping cough, where I expressed a hope* it would prove useful before any trials were

* Med. and Phys. Journal, vol. ii. p. 117.

made, it has not been productive of any material or lasting benefit.

In the troublesome cough and irritation of the lungs, threatening consumption, often continuing for a length of time after measles, as well as in the secondary stages of the complaint, digitalis is an excellent remedy.

In hæmorrhage, and in acute rheumatism, its powers have been long established, particularly on the authority of the practitioners of Manchester. But when a variety of other remedies, such as opium, calomel, and James's or Dover's powders are administered at the same time, it is not fair to attribute the whole of the benefit to the foxglove; which, however, seems to have been too generally done. When a grain of the powder, with half a grain of opium, is given at bed time, a few drops of laudanum, with tincture of castor, every four hours during the day in menorrhagia, it is surely unreasonable to attribute the cure to this herb alone; or if hæmorrhage should chance to stop after the first dose, it is not less so to infer that it was in consequence of the medicine*. Nor is it more correct to ascribe to it the relief obtained in rheumatic pains when

* See Ferriars Essay, p. 7. et seq.

an equal quantity of opium, and probably of calomel, was taken at the same time. Yet this has been the general practice, as may be seen in the various publications on the subject. In hæmorrhage and rheumatism I have had occasion to use it less frequently than in the cases just mentioned, because they have generally yielded to other means, the former to the cautious abstraction of all external and internal stimuli, the latter in the first stage, to the same, though not to an equal extent, assisted by a mild course of mercurial laxatives, opium, and calomel at bed time, and by banishing the hot and sweating system entirely from my practice; and in the secondary stages, by mild tonics, friction, exercise, and regimen. There is so much of chance and accident in the changes incident to disease, both salutary and otherwise, that the practitioner is continually imposing the belief upon himself that these have been effected by his remedies, when probably they had no share in its production; he obtains censure or applause from others when probably he merited neither; and his reputation will be advanced or checked according as his prescriptions have fallen in with the favourable or unfavourable changes of

disease. Hence the necessity of waiting patiently the results of numberless trials, under every variety of circumstance, and of watching attentively the natural fluctuations of disease, before a general inference be drawn in favour of any individual remedy.

Though few remedies will be found more extensively beneficial than foxglove, yet few are so limited in their salutary effects uncombined with others. Bark will cure intermittents, mercury will cure lues and many other diseases, without any other auxiliary; but digitalis will scarcely cure any disease without the aid of some other medicine. Though it may evacuate the water in dropsy other remedies will generally be found necessary to prevent farther accumulation.

On the mode of preparation and exhibition I have little to add to the observations published in the Medical and Physical Journal, for September 1799, p. 120 to 122.

Whether the plant of the natural growth, or that cultivated in the garden, be preferred, it should have attained its full maturity before it be gathered for use; the largest and coarsest leaves should then be selected and dried in the shade; and when sufficiently dry, they should

be packed close in paper bags, suspended in the kitchen, or in a room where a fire is constantly kept in the winter, and used for tincture or infusion without farther drying. In this manner their virtues will remain for some years unimpaired; but when readily procured, a fresh supply should be laid in at the proper season every year. When wanted for powder no more than is required for present use should be dried at one time, since, if a larger quantity be kept in a vial, as is still the practice with some apothecaries, it will, by frequent exposure to the air, soon become inert. Hence the cause of the great variation of its strength, and frequent failures complained of; and hence the necessity not only of caution in the mode of preparation, but in having standard formulæ which will possess the same powers at all times, in all situations and circumstances. With this view the following were recommended at the time, and submitted to the learned College of Physicians of London, for insertion in the next edition of their Pharmacopæia, through their then worthy and learned president the late sir George Baker: Specimens of the tincture, accurately prepared, were at the same time transmitted to him and to Apothecaries Hall.

Standard Tincture.

℞. Folior. Digital. Purpur. exsiccat. ℥j. Spiritus tenuioris ℥viij. Digere per dies septem, et per chartam cola.*—vel,

℞. Folior. Digital. Purpur. recent. incis. et contus. ℥iv. Alcoholis ℥v. Digere per dies septem, et cola.

This last makes a beautiful dark green tincture, and if made in May or June is perhaps preferable to the former, as the virtues of the leaves will then be unimpaired. I have ascertained that by drying, the leaves lose from three fourths to four fifths of their weight, so that in this formula I allow the three ounces of water, supposed to be contained in the fresh leaves, to the five of pure spirit, which is a larger proportion of the spirit than in the first formula,

* In the edition lately published of their Pharmacopæia, the College have adopted this formula, directing the maceration of this, as of all the tinctures, to be continued for fourteen days, which, as a general rule, is undoubtedly an improvement.

The Edinburgh College have likewise adopted it.

Both the London and Edinburgh Colleges have, I perceive directed the addition of a spirituous tincture to the infusion: this I have purposely avoided, preferring some aromatic substance, as I am guided in the kind, quantity, and quality of the spirituous addition, by the particular circumstances of the case for which it is prescribed, for the most part choosing that which possesses diuretic powers, and which consequently promotes the efficacy of the Foxglove.

but nearly the same of the leaves. The strength will be found nearly equal.

Standard Infusion.

℞. Folior. Digital. Purpur. exsiccat. ʒjß. Aquæ ferventis ℥viij. Zingiberis incis. ʒß. Macera per horas quatuor in vase operto, et cola.

CHAP. VIII.

Of Polysarcia, obesity, or corpulency, as a cause of dropsy of the chest.

WHEN treating of the predisponent causes of the disease, p. 100, it was remarked that inordinate corpulency, concurring with a thick short make, was one of the most frequent and powerful which occurred; insomuch, that it has been deemed necessary to allot a separate section for its consideration, and for pointing out its causes and the means by which it may be counteracted.

In health a certain portion of fat is distributed throughout the different parts of the body for the most important and salutary purposes in its œconomy: hence, when the body is corpulent, it is found not only under the skin, but between the muscles, and even the fibres of the muscles; in the cavity of the abdomen, about the kidneys and mesentery; in the loins; and particularly in the omentum or cawl, causing the protuberance of the belly in fat people; in the cheeks and mammæ; and about the heart.

As long as it is confined within moderate bounds, it facilitates, and indeed is necessary to the various motions of the body, at the same time that it gives shape, symmetry, and beauty to the whole. But when it increases beyond certain limits, so as to impede the free exercise of the healthy functions, and to occasion deformity, it is then considered as a disease, which has been termed *polysarcia*, or obesity, by Nosologists.

Though the general increase of the body thus induced, by pressing in every direction on the lungs, causes imperfect and difficult respiration, it is the accumulation of fat in the omentum, and about the other abdominal viscera, which more immediately does so, and by preventing the free descent of the diaphragm, and full expansion of the lungs, more particularly predisposes to dropsy of the chest.

The quantity of fat thus accumulated presses also on the larger blood vessels and on the viscera, necessarily impeding the circulation of the blood and lymph through them, while it occasions an accumulation in the vessels of those parts destitute of fat, as the head and lungs; whence respiration is still farther interrupted, and the functions of the brain are imperfectly performed. Thus the stupor,

drowsiness, or lethargy, impaired memory, aversion to exertion, which frequently end in apoplexy, epilepsy, or other violent disorders, as well as dropsy of the chest, incident to corpulent subjects. The laxity of fibre, and the great accumulation of fat frequently found about the heart in such circumstances, contribute greatly to the production of these evils.

The *predisposition* to obesity is various in different persons: in some habits it is so strong that a deposition of fat takes place to an inordinate degree, in spite of a constant moderation in the gratification of the appetite; while in others the unlimited indulgence of it is insufficient to produce any degree of fatness: this depends on constitution.

The general *exciting cause* of polysarcia, independent of peculiarity of habit, is certainly a free indulgence of the appetite in the use of nutritive food, and fermented liquors, since it is only among those who enjoy the means of obtaining the comforts of life without hard labour that this state is at any time observed. The money making citizen, the opulent farmer, (and more especially their wives, who enjoy their feeding with less exercise and anxiety), the indolent rector, the serjeants of

regiments in peaceable quarters, or of the militia; the masters of well frequented inns and their wives &c., are those whose rotundity of belly marks the superabundance of their ingesta, and who perspire and wheeze under a load with which they have voluntarily incumbered themselves.

Whenever a person of a constitution predisposed to obesity, is enabled to indulge in good feeding, leads a calm indolent life, free from mental inquietude, and uses much sleep, corpulency generally ensues. These facts are too well known and admitted to require illustration.

The causes of corpulency being thus well understood, the means of prevention and removal are not less obvious: in this the patient must in a great degree minister to himself: the prevention and cure will depend upon the proper regulation of his diet, exercise and sleep. Medicine will only be necessary to obviate particular symptoms, or diseases, arising from or connected with it.

The patient must be enjoined moderation in eating, drinking, and sleeping, together with much bodily exercise, so that the *ingesta* may be less than the *excreta*. By the proper management of these I have no hesitation in

affirming that the most corpulent and unwieldy may be reduced within moderate bounds in a reasonable time with an acquisition of health, strength, vigour of body and mind;—that John Love and Daniel Lambert might have got rid of the load of fat with which they were encumbered, and by which they were eventually suffocated, and enjoyed comfortable health, had they followed the example of the Italian nobleman *Cornaro*, or of Thomas Wood, the miller of Billericay, whose history shall presently be mentioned, by changing the habits of living which produced their corpulency, and conforming to a particular regimen.

If the stomach possess strong digestive powers, and be capable of converting into chyle every digestible part of the aliment that is taken in; and if the proper vessels at the same time take up this chyle, and deposit much fat, it is obvious that the most direct method of diminishing the deposition, will be to diminish the quantity of food, or to take less nutritious substances as food. The advice of Celsus, of taking but one meal a day, namely dinner, as far as regards animal food, is judicious; for meat should only be allowed once a day, and suppers should be entirely forbid. The food

should be plain, and the meat lean, one dish only being used. Butter, all fat, and high seasoned substances, should be avoided, and the vegetables should bear a full proportion to the animal food, as being less nutritious; and these should be of the amylaceous and farinaceous, not of the cold, crude, flatulent kind. The old adage of the temperate, "rise with an appetite," should be constantly kept in mind; at least the stomach should never be surcharged with a quantity which it is incapable of digesting perfectly. "Any one," says Doctor Cheyne, "may loose a pound of blood, take a purge, or a sweat, by dropping the great meal, or by abstaining from animal food, or fermented liquors, for four or five days, as effectually as by opening a vein, swallowing a dose of pills, or taking a sudorific bolus:"* and it might be added, with far better effect, and advantage to the constitution; for bleeding purging and sweating directly debilitate, while they increase the predisposition to corpulency, if the exciting causes be not removed.

The article of *drink* requires still more attention. Corpulent persons generally indulge to excess in the use of liquids: if this be

* Essay on health.

allowed every endeavour to reduce them will be vain, even if they be moderately supplied with solid food; but abridge them in it, within certain limitations, and they may, even at pleasure, get rid of the encumbrance. When the stomach is sound, and the digestive powers are active, the unlimited use of liquids, even of water, contributes greatly to the more perfect solution or assimilation, absorption, and deposition of the nutritive parts of the solid food; whereas when not sufficiently diluted a large portion passes off by the bowels: hence the common observation that "water is fattening." If any one wish to prepare himself for long continued laborious exertion, such as has been the fashion of late years in this country, or to reduce his exuberant fat, and increase his muscular strength, he will habituate himself gradually to a dry solid nutritive diet, with as little liquid as possible, and to regular exercise, by which the superabundant fat will be absorbed, the muscular fibre will be strengthened, and all the functions of the body will be performed with greater vigour. The groom thus trains his horses for the turf, or the field. By a law of the animal œconomy, which has been noticed above, p. 100, the absorbents will

invariably take up and convey to the habit the superabundant deposited fat, and thus for a time supply the deficiency of liquids.

Sleep. Scarcely less than food and drink does sleep contribute to the growth of the body, a certain portion being necessary to the due performance of its healthy functions, as well as those of the mind, the quantity depending upon age, constitution, and habit. The causes and consequences of sleep on the body and mind, when indulged in moderation, to excess, when disturbed or distroyed, and the circumstances which promote or interrupt it, are beautifully described by the poets: thus Stirling,

" O gentle sleep! thou cherisher of health!
From temp'rance bred, the nurse of sweet repose!
In whom the peasant finds a mine of wealth,
To whom his happiness the lover owes;
Thou balm of life! whose kindly warmth restores
Light to the eyes, and vigour to the heart;
Whose presence luxury in vain implores,
Kind while thou fly'st to take afflictions part;

Say, by what magic fetters dost thou bind
In thy delightful thrall the agitated mind?"

Persons freest from mental inquietude enjoy the most natural and sound sleep, and are

consequently the most prone to corpulence: thus the immortal Shakspeare,

" Let me have men about me that are fat
" Sleek headed men, and such as sleep a-nights:
" Yond Cassius has a lean and hungry look,
" He thinks too much —— ——
" Such men as he be never at hearts ease."

While those who are continually haunted by an evil conscience seek for this *balm of life* in vain: hence the following lines from the same inimitable bard,

———— " O gentle sleep,
" Natures soft nurse, how have I frighted thee,
" That thou no more wilt weigh my eye-lids down,
" And steep my senses in forgetfulness?—
" Wilt thou, upon the high and giddy mast
" Seal up the ship-boys eyes, and rock his brains
" In cradle of the rude imperious surge;
" And in the visitation of the winds,—
" And, in the calmest and the stillest night,
" With all appliances and means to boot,
" Deny it to a King?———

The effects of sleep, however, have been over-rated. Though it be universally admitted that much sleep favours the deposition of fat in animals as well as man, yet that its influence

is so powerful, independent of food, as to increase the fat of animals who sleep during the winter months, as has been asserted by some respectable writers, is not founded in fact, since more accurate observations have clearly demonstrated the contrary. The mistake seems to have originated with Aristotle, and other naturalists copied it from him: he asserted that the loir passes the whole winter without eating, and that during this period of abstinence, it becomes extremely fat, being more nourished by sleep alone, than any other animal is by food: whence these lines of Martial,

" Tota mihi dormitur hyems, et penguior illo
" Tempore sum, quo me nil nisi somnus alit."

The celebrated Haller appears to have given credit to the same assertion. " Nam et animalia," says he, " quæ hyemem inter somnos transigunt, nihil de alvo egerunt, vix perspirant quidquam, denique circulatione sanguinis ita sunt modica, ut penitus frigeant.——Si vero nihil consumunt, non videtur necesse, ut reparent.——Et in somno adeps adeo non videtur consumi ut augeatur:"* and again,

* Elem. Phys. T. 1. p. 48.

"Neque satis certum est animalia macra ex hibernaculis prodire, in quibus latuerunt." The functions of animals who sleep, or are in a state of torpor, during the winter, being nearly suspended, the consumption of fat, which serves them for food, is necessarily proportionably small; but that there is a sensible diminution on their re-appearance in the spring has been clearly established.

From the obvious effects of much sleep, in favouring obesity, it has been affirmed, that the functions of digestion, assimilation, absorption, and deposition, were more perfectly and actively performed at night, during sleep, than in the day; but this opinion is contradicted by experience. They doubtless go on uniformly and regularly without interruption; hence, as sleep is intended to restore the powers of the body and mind, as well as the juices, impaired or exhausted during the exertions of the day, it will be obvious that, in constitutions naturally prone to corpulence, so powerful a cause must to a certain degree be removed, by abridging the quantity of sleep, before the effect can be expected to cease.

Instances of enormous corpulence giving rise to the most serious inconvenience, and

eventually leading to fatal diseases, are very frequent in this country, from these causes, and more especially from the general consumption of animal food and fermented liquors, as ale and porter. A few examples of the most extraordinary in illustration of the principles which have been laid down, shall next be selected.

Mr. John Love was, in the early part of his life, so thin and meagre, that a *tabes*, or consumption, was apprehended; and having, by the advice of physicians, been provided with every kind of nutritious food, he was led into such habits of indulgence, that he resigned himself entirely to the pleasures of the table. Having commenced business as a bookseller at Weymouth, which required little corporeal exercise, he gave full scope to his propensity for good living, and soon grew as remarkably corpulent and heavy as he was before light and slender; his weight amounting to 26 stone, or 364 lbs. At length, suffocated by fat, he died in the 41st. year of his age, in October, 1793.

The following interesting case published in vol. 2d. of Medical Transactions of the College of Physicians, by sir George Baker, is strongly illustrative of what may be accomplished in circumstances of the greatest corpulence, and

diseases consequent upon it, by a rigid adherence to the plan of diet and regimen we have been recommending.

"Mr. Thomas Wood, a miller, at Billericay, in Essex, was born on the 30th. of November, 1719, of parents who were apt to be intemperate in their manner of living, and was subject to various disorders, particularly rheumatism till he attained the age of 13 years. He then had the small-pox in a favourable way; and from that time became healthy, and continued to have no complaints, to the age of about forty three years. From his attaining the state of manhood to this period, but especially during the latter part of the time, he indulged himself, even to excess, in fat meat, of which he used to eat voraciously three times a day, together with large quantities of butter and cheese. Nor was he more cautious with respect to strong ale, which was his common drink. About his fortieth year he began to grow very fat; but, finding that he had a good appetite, and digested his food without difficulty, and that his sleep was undisturbed, he made no alteration in his diet. It was in his 44th. year when he first began to be disturbed in his sleep, and to complain of the heartburn,

of frequent sickness at stomach, pain in his bowels, headache, and vertigo. He was now sometimes costive, at other times in the opposite extreme; had an almost constant thirst, a great lowness of spirits, violent rheumatism, and frequent attacks of gout. He had likewise two epileptic fits. But the symptom which appeared to him to be most formidable, was a sense of suffocation, which often came on him, particularly after meals. Under such a complication of diseases, every day increasing, he continued till August 1764, when the Rev. Mr. Powley, a worthy clergyman in the neighbourhood, observing his very ill state of health, and the extreme corpulence of his person, recommended to him an exact regimen; and pointed out the "Life of Cornaro," as a a book likely to suggest to him a salutary course of living. This book convinced him that intemperance was the cause of all his complaints; and he determined to try the effects of a change of life. At first he confined himself to one pint only of his ale every day; and used animal food sparingly. Finding this method to answer to his satisfaction, (for he felt easier and lighter, and his spirits became less oppressed), he was encouraged to proceed;

and, after having pursued this regimen for two months, he deducted half the quantity from his allowance of ale, and was still more sparing of gross animal food. In January 1765, he left off all malt liquor; and in the following month, he began to drink water, and to eat only the lighter meats. Under this degree of abstinence, although some of his complaints were relieved, yet others remained in full force; the rheumatism tormented him, and he now and then had slight fits of the gout. In June 1765, he began the exercise of the dumb bell, which he constantly persevered in. He continued to drink water only till the 25th. of October in the same year; but from that time he abstained altogether from drink, (except on the 9th. of May the following year, 1766, when he drank two glasses and a half of water), and took no liquor whatever, except what he swallowed in the form of medicine. From June 1767, he abstained from butter and cheese; and the 31st. of July, in the same year, was the last time of his eating animal flesh; his diet, from that date, being principally confined to pudding made of sea biscuit. He allowed himself very little sleep, generally going to bed at eight in the evening, sometimes

earlier, and rising about one o'clock in the morning, very rarely being in bed after two.

Under this strict course of abstinence he still continued to live till the year 1783, expressing, in the highest terms, the great pleasure and tranquillity of mind which he enjoyed in consequence of it. The poor diet, to which he had accustomed himself, became as agreeable to his palate, as his former food used to be; and he had the additional satisfaction, to find his health established, his spirits lively, his sleep no longer disturbed by frightful dreams, and his strength so far improved, that he could carry a quarter of a ton weight; which weight he in vain attempted to carry when he was about the age of thirty years. His voice, which was entirely lost for several years, became clear and strong. In short, to use his own expression, he was metamorphosed from a monster, to a person of a moderate size, from the condition of an unhealthy, decrepit old man, to perfect health, and to the vigour and activity of youth. He used much exercise, his business leading him to ride a great deal on horseback; continued the exercise of the dumb bell, and took every occasion of leisure to dig in his garden. Mr. Wood was

a great enemy to all fermented liquors, to butter, and to salt; and he found that a pudding of common fermented bread was less agreeable to his stomach than one of sea biscuit. The pudding which was his sole support during two years, was made as follows: three pints of skimmed milk, boiling, were poured on one pound of the best sea biscuit, broken into pieces: this was done over night, and the ingredients were left to stand together till the following morning, when two eggs were added: this compound, being boiled in a cloth about the space of an hour, became a pudding of sufficient consistence to be cut with a knife. Of this, his quantity used to be a pound and a half, at four or five in the morning, at his breakfast, and the same at noon, as his dinner; after which he abstained from food till the next day. But having grown fatter under this diet, he judged it necessary to quit it, as being too nutritious; and during three months he lived on the following composition, viz.: one pound of coarse flour, and one pint of water, boiled together. This he was at first much pleased with; but afterwards found it disagreeable to his stomach, and not easily digestible. The pudding which he afterwards used, was com-

posed of one pound of flour, of which the coarse or ordinary kind of sea biscuit is made, boiled with a pint and a half of skimmed milk, without any other addition.

Mr. Wood continued in this course of abstemiousness, lively, active, and full of strength, until the 21st. of May, 1783, when he died, in the 64th. year of his age, of an inflammation of his bowels, by which disease his mother and brother had been carried off. A few days previous to his death, he had travelled more than sixty miles on horseback, without any sense of fatigue.

The principal reason which led Wood to refrain from drinking, was, that it excited a desire for a larger quantity of food. Much drink, he said, operates as a provocative to eating, as salted meats and high sauces excite a desire for drinking. But in order to be able to abstain from drinking, the food should be of a moist nature, and all dry and salted meats, and indeed every thing commonly called relishing, should be shunned. He did not mean to assert, that any animal can live without moisture; but considered eating his pudding the same as eating the dry flour, and afterwards drinking the quantity of water of which

it was made." The sequel of the case is given in the 3d. vol. of Med. Trans. by the same. This case supplies the place of volumes on the subject, by comprehending every thing that can be said upon it: It exhibits in a striking manner the regular operation of the causes in producing, in the first place, the different stages of corpulence, in the next, the morbid states consequent upon it, and finally the salutary effects of a particular regimen, in removing both, apparently under the most hopeless circumstances. It shews likewise that the most sudden transitions in diet may be resorted to, in certain circumstances, not only with impunity, but with the most beneficial results. Let those who are wheezing and groaning under the load with which they have voluntarily encumbered themselves, follow the example of Wood, and they may with equal certainty get rid of their encumbrance and enjoy health of body and mind, as he did, for many years.

The good effects of a diet, thus reduced and regulated, both in quantity and quality, were long before illustrated by the example and precept of a noble Italian, *Cornaro:* He was at an early age encumbered with a corpulent habit, but relieved himself, and lived in health

and comfort to an extreme old age, by a rigid adherence to temperance and sobriety. He restricted himself to twelve ounces of solid food a day, which comprised one egg, and bread; and his drink to fourteen ounces, never including more than one glass of wine. See his treatise *sulla Vita sobria.*

What a contrast does these two instances exhibit to that of Love, and Edward Bright, a grocer of Maldon in Essex, which I am about to relate! The disposition to corpulence was, in this case, hereditary; many of his ancestors being remarkably fat, and so early as the age of twelve years and a half, he weighed 10 stone and 4 pounds, or 144 pounds. Before he attained the age of twenty he weighed 24 stone; and increased about 2 stone in each year, so that at the time of his death his weight amounted to 44 stone, or 616 pounds. He was 5 feet 9 inches and a half high; his body round the chest, just under his arms, measured 5 feet 6 inches; and round the belly 6 feet 11 inches; his arm in the middle, was 2 feet 2 inches in circumference; and his leg, 2 feet 8 inches. He died at the early age of 30 years, in November 1750. The great constitutional predisposition to fatness was here evinced by

the circumstance, that from his childhood, to within three years of his death, when he became unwieldy, he took much exercise, and was a nimble and quick walker. But this predisposition was not counteracted by his mode of living; for he had always a good appetite, and in his youth was rather remarkable in that respect; and he drank also a considerable quantity of ale and strong beer: latterly his principal drink was small beer, of which he usually drank a *gallon* a day. He enjoyed good health during the greater part of his life; but within the last three years he suffered several inflammatory attacks, one of which terminated fatally. After his death, seven men of 21 years of age were enclosed in his waistcoat, in consequence of a wager, "without breaking a stitch or straining a button."

Senertus mentions an instance of a woman of 36 years of age, who weighed 480 pounds, and another of a man whose weight was 600 pounds.

But Mr. Daniel Lambert, who exhibited himself in London, in the spring of 1806, furnishes an instance of the greatest bulk, perhaps, to which the human body has ever been known to arrive; "He was born at Leicester,

in 1770, and was very strong and active in his youth, being an expert swimmer, and much addicted to the sports of the field. Before the age of 20, he found that he was disposed to obesity, and in his 23d. year he weighed 30 stone: when he arrived in London, he attained the enormous weight of 50 *stone* and four pounds, or 704 pounds. His height is five feet eleven inches. He succeeded his father in the office of keeper of the prison of Leicester; and it was within a year after this, that his bulk received the greatest and most rapid increase. This he justly attributed to the confinement and sedentary life to which he was then obliged to submit; especially as he had formerly been accustomed to active exercise: He is said to have been temperate; but we have no particular account of his mode of living, except that, in his younger days, he was never accustomed to drinking, though he spent all his evenings in convivial parties, and at present that he drinks no other beverage than water, and eats of one dish only at a time. It is said that he scarcely knows what indisposition is, is chearful and intelligent, without any difficulty in respiration, and not disposed to drowsiness. Notwithstanding his enormous bulk, he is able

to go up stairs with great ease, and "conceives himself," says his biographer, "that he could walk a quarter of a mile. He measures 9 feet 4 inches, round the body, and 3 feet 1 inch, round the leg. The feet and hands are not much enlarged, but the skin, distended with fat, hangs in folds over the ankles." See Eccentric Mirror for 1806.

Very different from the above was his state when he exhibited himself at Sudbury, in May, 1809. He had been recently weighed at Ipswich, and his weight was 52 stone 11 pounds, or 739 pounds. His breathing was very laborious and difficult, even when sitting still in his chair; his countenance was of a leaden hue, and expressive of great anxiety; he seemed to have constant drowsiness, amounting nearly to lethargy; though I saw him about eleven o'clock in the morning he appeared as if he had had no rest the preceding night: he answered the questions which were put to him in a hurried and abrupt manner, and frequently made a kind of quick convulsive inspiration, clearly evincing the difficulty with which respiration and pulmonary circulation were performed: when his attention was not roused he could scarcely keep his eyes open; yet his pulse was regular, and some-

what full. He had for some months suffered severe rheumatic pains, which, he said, prevented him from using exercise; but it was obvious that this was only a pretence to conceal his real inability; for he seemed scarcely able to change his posture on the chair, when it became irksome to him, which was frequently the case, from the immense weight of his body and consequent pressure on the hips. From this cause and from the distention of the skin, owing to the accumulation of fat, the cuticle was separated, and there were painful excoriations about the hips and on his feet. The weight of his feet too seemed very troublesome, his attendant being frequently called upon to move them from, and to replace them on a stool which served them as a resting place. Though Mr. D. Lambert had not lived intemperately for some years, yet he was not remarked for those habits of strict self denial and abstinence, either in eating or drinking, which were necessary to render his situation tolerable; and he could enjoy a bottle of port with any person who chose to treat him with one; his gaiety was evidently assumed, and forced, as his life seemed obviously a burthen to him. I retired with disgust from the sight of such a

monster, observing to the clergyman who accompanied me, that his life was not worth a days purchase, and that he would most probably die suddenly.—He died early the following month suddenly, I understand, as he was preparing to exhibit himself at Thetford, in Norfolk.

The above examples serve to demonstrate clearly that, under the most healthy condition of the body, there is a certain point or stage beyond which the accumulation of fat cannot increase, without serious derangement of the functions of some important viscus; and the instances are indeed rare where it advances so far without much greater inconvenience than occurred in these: the most frequent seems to be that connected with the function of respiration, appearing in the form asthma, all the varieties of dyspnœa, generally attended with cough, and a copious yellowish expectoration, very frequently ending in dropsy of the chest, of which many of the cases in the Appendix No. 1. furnish striking examples.

APPENDIX.

No. I.

CASES OF HYDROTHORAX, &c.

THE following case was published in the Medical and Physical Journal, for March 1802. Though not immediately connected with hydrothorax, it is so interesting in many respects as to appear worthy of being recorded in this place. Beside furnishing a subject for speculation to the Physiologist, it may serve as a guide to the inexperienced practitioner should similar instances fall under his care, by shewing him that the operation of tapping may be performed with perfect safety in any period of pregnancy, and by pointing out at the same time the manner of performing it.

CASE I.

On the 13th, of June, 1791, I was desired to visit Mrs. C—— of ——Hall, in Essex, a married woman,

in the 34th year of her age. I found her labouring under confirmed genuine ascites, unaccompanied with the slightest traces of anasarca in any part of the body. She had in a certain degree the characteristic emaciation of this disease, but not its general concomitant, debility. The appetite, bodily strength, and indeed all the bodily functions, with an exception or two, which shall be presently noticed, were unimpaired. The eye and countenance too, had lost none of their wonted animation, for she was remarkable for the vivacity and gaiety of her disposition. The urine, she imagined, was somewhat diminished in quantity, but natural in appearance. The origin of the dropsical affection was dated about two years back; and it was attributed to an injury she fancied she received, in her last and only lying-in, five years before. This opinion seemed countenanced by the catamenia having been more or less irregular, both as to time and quantity, ever since. She was supposed to have inherited a ſcrophulous diathesis, several of her family having died of what was pronounced *phthisis ſcrophulosa*.

Various remedies had been used without any advantage; she had been tapped three times; and the water was rapidly accumulating, though evacuated only four days before.

After attentively considering all the circumstances of the case, I had no hesitation in ascribing the dropsy to disease of the right ovarium: this I found to have been the opinion of Dr. Orme, of London, who was consulted in the early period of the disord-

er, and it gained additional confirmation from the facts communicated by Mr. Gretton, a respectable practitioner of Colchester, who had always attended her. He assured me, that on evacuating the water, an evident fullness or tumefaction could be felt in the right side, apparently in the region of the ovarium.

The common remedies were administered in various combinations for ſome weeks, but without effect. They could not, however, be said to have had a fair trial, having been taken only in small quantity, and very irregularly, owing to a peculiar irritability of the ſtomach to almoſt all diuretic medicines. Though every precaution was taken by the addition of the moſt grateful aromatics, and small doſes of opium, yet they were ſeldom retained long enough to act upon the habit. As I could not possibly be aware, of what was ascertained some weeks afterwards, that my patient was pregnant, this peculiar state of the ſtomach was at the time a source of surprise and embarrassment to me, the appetite and digeſtion being good.

On my visit, the 9th, of August, when the operation was judged necessary, for the first time since my attendance, I found Mrs. C——'s mind strongly impressed with the belief that she was pregnant.—This she grounded on the absence of the catamenia the two last periods, and on her having the usual symptoms, especially sickness, and ſometimes vomiting in the morning. After a lapse of five years ſince her lying-in, with every reason to believe the

existence of disease of one ovarium so extensive, as to be the sole cause of the dropsy, apparently extending its morbid influence to the uterus itself, (if a constant irregularity in its functions ever since, were to be regarded as criteria to judge by), besides this organ having been surrounded by, or floating in a body of water for more than two years, I could not be supposed to assent readily to her opinion. No inconvenience occurred either during or after the operation. When the water was evacuated, the hypogastric region was fuller than usual; so much so, as to induce me now to think her opinion well founded. The enlarged ovarium was distinctly felt on examination, but no tumour perceived externally.

In order to avoid repetition, the different times at which the operation was performed, and the quantity of water drawn off each time, are specified in the annexed table, and only such circumstances mentioned as seemed worthy of being recorded.

Toward the middle of August, every doubt as to her pregnancy was removed, for she quickened, the motion of the fœtus having been distinctly and repeatedly felt by her.

On the 25th of September, tapping being again deemed expedient, additional precaution was necessary, with the view of avoiding the hazard of abortion, or of wounding the distended uterus, now emerged above the brim of the pelvis. I directed a cordial draught with twenty-five drops of laudanum to be administered half an hour before the operation; and the patient being placed in the usual posture, I en-

deavoured to press the body of the uterus as far back as possible with both my hands, at the place where the puncture was to be made, while, with my fingers, the integuments were at the same time protruded forwards. By these precautions, the distance between the parietes of the abdomen and the uterus at this place was increased, and the integuments rendered more tense. In the mean time, Mr. Gretton measured on the trochar the length that was judged merely sufficient to enter the cavity of the abdomen; and by firmly placing the forefinger of the right hand as a guard upon it, prevented any more entering than was absolutely necessary. The puncture being then dexterously made, and the stilette withdrawn, the water was evacuated more gradually, the mouth of the canula being now and then plugged up by a piece of wood prepared for the purpose; and a more regular uniform pressure was preserved by means of a proper bandage. No untoward circumstance occurred either during, or after the operation.

Before the whole of the water was removed, the motion of the fœtus was not only felt with great force against the hand, but distinctly seen through the integuments and flannel bandage.

November 9th, she had incessant sickness and vomiting, with severe uterine pains which threatened abortion the whole of this morning. The breathing was much interrupted, and she suffered great inconvenience from distention of the integuments of the abdomen. As these evidently proceeded from inordinate pressure on the diaphragm, uterus, and other

abdominal viscera, the operation having been too long delayed, so they all speedily vanished on the evacuation of the water. Some part of the fluid was tinged with blood, and considerable delay and inconvenience were experienced from the pressure of the uterus against the canula; yet she made no complaint either during, or after the operation.

December 30th, she bore the operation better than usual, being in high spirits the whole time, though the motion of the fœtus occasioned her much uneasiness, and though greater delay was experienced than before. During the latter months of pregnancy, she became, as might naturally be imagined, extremely heavy and unwieldly, especially for some days before the two last tappings: yet her strength, appetite, and natural vivacity continued unimpaired to the last; and on the 24th, of January, 1792, she was delivered of a strong fullgrown boy, after a very easy and quick labour, before Mr. G. her *accoucheur*, or myself arrived. The boy is now living, and is remarkably strong and healthy.

Her recovery was unusually rapid, though there were several pints of fluid in the cavity of the abdomen at the time of her delivery, and though it accumulated so quickly afterwards as to require being drawn off in eleven days.

It may be worthy of remark, that after this period till the sudden change which preceded and occasioned her death, she affirmed, her general health appeared rather to improve than otherwise; a circumstance to be wondered at, considering the immense quantity

of matter that had been for a great length of time collected within the body, as will be seen in the dissection. It serves however, I think, to illustrate and confirm a fact in pathology, which is now generally admitted, that what is called well digested or concocted pus, whether it be shut up in a cavity, exposed to the air, or carried to the habit through the medium of the absorbents, is productive of no inconvenience, either to the surfaces on which it rests, or the constitution at large: so aware is every judicious surgeon of this, that he cautiously avoids exposing the tender and irritable granulations of healing wounds and ulcers by wiping their surfaces too clean. It seems at the same time to prove, what is I think likewise allowed, and what I have more than once observed, that the ovaria are endowed with comparatively less acute feeling than perhaps any other part of the body; for in the present instance, the mechanical stimulus of distention occasioned no uneasiness. What other part or organ would have suffered so serious an injury and so great a degree of distention without proportionable inconvenience both local and constitutional?

It is interesting too, to observe the influence pressure had on the accumulated fluids during the last month, as might naturally be expected, when the uterus was attaining its utmost extent of size, and when, consequently, the pressure on the numberless exhalant and absorbent mouths opening into the cavity of the abdomen was the greatest, the effusion was proportionally retarded. This did not occur

so uniformly and regularly in the preceeding months, for the obvious reason that it must have been influenced by various causes and circumstances which did not now exist. But while the mechanical influence of pressure, muscular, and arterial action, in promoting lymphatic absorption and circulation, is to be admitted to a certain extent, yet I am far from assenting to the notion of some modern physiologists, that they are the sole agents concerned in producing these effects.

The operation was in this case performed in the usual place on the left side. Would a puncture with a lancet at the umbilicus, as recommended by the learned president of the London Medical Society, Dr. Sims, be a more simple, easy, or safe mode of drawing off the water in similar cases? I am induced to think it would not. It might, probably, succeed equally well in the early stages of pregnancy; but the pressure of the uterus, after the fourth month, against the opening thus made, would very soon be such as to require the introduction of a female catheter, or similar instrument, to push it backwards; and it is well known, that a round instrument passed into an opening made with a lancet would occasion much pain and inconvenience; more so, I am persuaded, than our patient experienced. For these reasons, the method adopted with so much success in the case of which the history has been given, claims, I think, a decided preference. A large female catheter was occasionally introduced through the canula.

DATES OF THE DIFFERENT TAPPINGS &c.

When tapped	No. of Pints.	Days intervening	Pounds weight.
1790.			
August 23.	11		12½*
1791.			
March 23.	25	212	28½
June 9.	33	78	38
August 9.	33	61	37
September 25.	37	33	42
November 9.	38	45	41
December 30.	12½	51	14
1792.			
January 24, delivered.			
February 4.†	27	36	30½
March 2.	18½	26	20
April 11.	44	40	51
May 9.	44	28	49½
June 6.‡	36	28	40
June 11, died.	359‖		404

* This was not weighed, only guessed at; but all the other times the water was accurately weighed and measured, either by, or in the presence of the husband of the lady; and from the period of my attendance, in my presence also.

† About an ounce of thick good pus issued from the opening, at the close of the operation.

‡ The evening after the operation of this date, a train of symptoms came on, which left no room to doubt the gradual approaches of the fatal event which soon followed.

‖ The case of Lady Page Turner, related by Dr. Mead,* though more remarkable than this for the number of tappings and the aggre-

DISSECTION.

Permission having fortunately been obtained to inspect the body, Mr. Gretton very obligingly attended to conduct the dissection. On opening the abdomen, a sac of considerable size was observed in the right side of the hypogastrium, and nearly filling the right iliac region. This was found to be the right ovarium attached to the uterus by a thick neck, and adhering anteriorly to some extent to the peritoneum. It was partially collapsed, owing to about two pints of its contents, a thick, brown, well digested pus, having escaped through an opening on one side, sufficiently large to admit three fingers, into the cavity of the abdomen. Neither the uterus nor left ovarium shewed any marks of disease. The os tineæ seemed to be closed by a gelatinous-like substance, which induced me to think a second impregnation had taken place. But my much esteemed friend and preceptor, the celebrated Professor Munro, to whom the parts were transmitted, after having been carefully removed and preserved in spirits, assured me that this was not the case.

On dividing the sac, it was very thick but of a soft and spungy texture, extremely irregular on its internal surface, and containing upwards of three

gate quantity of wa ter evacuated, is less so in other respects, in so far as none of them were performed during pregnancy, and as there appeared no material disease of any organ, though the dropsy was supposed to have originated in the ovaria.

* Monit. et Præcepta Med. p. 148.

pints of matter similar to that found in the cavity of the abdomen. The external surface of the intestines, both great and small, was very considerably inflamed, verging in some places on gangrene; and it was smeared all over with the matter which escaped from the abscess, of which the greater part was contained in the pelvis. The liver was softer in its texture; and its connecting ligaments more relaxed and elongated than natural. The other viscera, as well as those of the thorax were sound. The head was not opened.

The inflammation of the intestines, not the mere rupture of the abscess, was, without doubt, the immediate cause of death; and that this was occasioned by the morbid stimulus of the purulent discharge from the sac seems equally probable; which shews, that though good pus be productive of no inconvenience to the surfaces by which it is secreted, it is highly noxious to others.

Had this case occurred to me at an earlier period, before suppuration, and impregnation had taken place, and before the stomach had, by sympathy with the uterus, in consequence of the latter, acquired such inordinate susceptibility to medicine, I think it probable the event might have been more favourable. I am inclined to draw this inference from the fortunate results of two similar cases which fell under my care not long afterwards.

The case of Dame Gregory Page, referred to in p. 9, of the appendix, is in many respects highly interesting.—It appears that the first year fifty-four pints were drawn off by tapping every month.

The following year so great a quantity was evacuated that twelve pints must have accumulated every week. The third year the water began to diminish so that only twenty pounds were taken away every month. But the fourth and fifth years she was tapped only three times in six and seven months, and no more than sixteen pounds removed every time.

During the intervals of tapping she was lively and cheerful, enjoying the society of her friends, and even dancing at balls, as before the attack.

After the last tapping, her general health, strength, and spirits began to decline, and a dropsy of the chest being added to her former sufferings, she gradually sunk under them.

"It is truly wonderful, says the learned author, that in such a period of time, so large a quantity of water as 1920 pounds should be supplied from the human body, which appears to have been first collected in the ovaria."

She directed in her will that a monument should be erected to commemorate so extraordinary a circumstance, with the following inscription.

Here lies Dame Mary Page,
Relict of Sir Gregory Page Baronet.
She departed this life March iv. MDCCXXVIII
In the LVI Year of her age.
In LXVII Months she was tapped LXVI times,
Had taken away CCXL Gallons of Water,
Without ever repining at her case,
Or ever fearing the operation.

The monument was erected in the fields, called Bunhill-fields, near London.

The following case is inserted merely with the view of shewing, among many other instances, peculiarity of habit, as strongly predisposing to the disease, not having at this period begun to preserve minute reports of any case.

CASE II.

January 24, 1791.—Mr. Ellis, a farmer, of Fordham, Æt. 60; a man of thick short make, and very corpulent. Strongly marked symptoms of hydrops pectoris, with hard anasarcous swellings of legs. Blind from a cataract of both eyes. Was prescribed squills, calomel, and extract of gentian in pills, with crystalls of tartar largely diluted. Returned sometime afterwards much relieved; but hearing no more of him, presumed the disease soon triumphed over medicine.

CASE III.

April 29, 1792.—Mr. Hammond, of Cavendish, a farrier and blacksmith, Æt. 50. Addicted for years to excesses in drinking intoxicating liquors. Has strongly marked symptoms of hydrothorax, attended with œdematous swellings of the ankles. This man applied to me more than once for dyspeptic and other symptoms, consequent on intemperance, before

the dropsy commenced. He was repeatedly relieved by medicine, but persisting in his habits of drinking he fell a sacrifice to the disorder, about two years afterwards. This case is introduced with the view of shewing the influence of peculiarity of habit in predisposing to certain diseases more than to others. Two of his brothers, the one a butcher, the other a carpenter, but equally addicted to the bottle, died of the same disease, after having experienced much and frequent relief from medicine. They were all men of low stature, of a thick make, and corpulent. Two of their wives died also of dropsy.

CASE IV.

Mr. Joseph Bell, Æt. 53. Every symptom of hydrothorax, together with cough and copious yellowish expectoration. Derived great benefit from blisters, squills, the resinous balsams, and other diuretics, but how long he survived afterwards I had no opportunity of learning.

CASE V.

August 18.—Mrs. Riddleston, of Lawford, Essex, Æt. 46, the mother of several children. Confirmed genuine ascites of more than three years standing, apparently arising from diseased ovarium. Has taken many and various medicines without any relief. The enlargement of the abdomen being very considerable I advised tapping, before any medicine was tried, to which however she would not submit.

I held out no prospect of success. She was, however, permanently cured by persevering in the following medicines, and is now in perfect health.*

℞. Nitri pur. ℈ij. Scillæ Pulv. gr. viij. Calomelan. gr. ij. Zingiber. pulv. ℈i. tere simul et Syr. Zingib. q. s. ft. Boli viij. Sumat. i. mane, merid. et h. s. cum mist. infra præs. cyatho.

℞. Bacc. Juniper. contus. ℥ij. Infunde in Aq. ferv. lib. ij. per horas aliquot; dein cola, Colatur. Adde Kali Acetat. ℥ß. Sp. Juniper. C. ℥ij. M.

Though this is not a case of hydrothorax yet, it deserves to be recorded as an inducement to a perseverance in a similar course of medicine, even under the most unpromising circumstances.

CASE VI.

August 31.—Mrs. B. the wife of the Rev. Mr. B. late of Bures, Æt. 30. Confirmed ascites, of several weeks standing, evidently arising from a considerable enlargement of one ovarium, for which various means were prescribed under the direction of Mr. Cline, prior to the appearance of dropsy. Mrs. B. is a woman of low stature, of delicate frame, and lax fibre, disposed to corpulency, and the mother of several children. The leg and thigh of the same side with the diseased ovarium were anasarcous to a very great degree, but those of the other side were not affected. Was perfectly and permanently cured by a plan similar to that prescribed for the subject

* October, 1808.

of the last case; but with larger doses of calomel, and the occasional exhibition of mild laxatives of crystalls of tartar and jalap. Had two children since her recovery, before she left this country, about three years after she first consulted me. I have not heard of her lately.

CASE VII.

October 7.—Mrs. F. Æt. 60. Extreme difficulty in respiration, especially on motion; paucity of urine, anasarcous swellings of ankles, and other symptoms which left no room to doubt the presence of water in the cavities of the chest. She was extremely weak and emaciated. I prescribed an electuary, consisting of crystalls of tartar, the cynchona, and pulv. aromat. made with syr. zingiber: but it disordered the bowels, and weakened her so much that it was discontinued; and the digitalis, by which she had been repeatedly relieved, under the direction of the family apothecary, was resumed. Her life was protracted for several years afterwards by this herb.

CASE VIII.

August 28, 1794.—Mrs. B. the wife of my worthy friend admiral B. Æt. 42. Of low stature, slender make, and delicate constitution. Great difficulty in breathing, especially on the least motion, or on going up stairs. Extreme languor and weakness; and is subject to fainting fits at times. Pulse about 100, feeble, and intermitting every three or

four strokes. Anasarca of feet and ankles; urine defective; no thirst; T. clean; appetite tolerable. *Alvus astricta cum flatu ac borborigmi.* Has been extremely delicate for some years, and subject to nervous complaints. Only one child, four years since. I suspect effusion in the pericardium, as well as the sacs of the pleura. Was restored to perfect health by the following plan, and has since enjoyed better health than before.

℞. Mass. Pilul. Scillæ ʒi. Camphoræ Pulv. ℈i. Canellæ alb. Pulv. gr. v. M. ft. Mass. in Pilul. xx divide: Sumt. ij. ter ind. cum mist. infra præs. coch. No. iij.

℞. Colomb. Rad. P. ʒi. Cort. Aur. P. ʒij. Semin. Coriandr. contus. ℈ij. Infunde in Aq. ferv. ℥viij. per hor. vi. dein cola; Colat. ℥vij. Adde. Sp. Juniper. C. ʒi. Kali pp. ℈ij. ft. mist.

℞. Cryst. tart. P. ʒiij. Conservæ Cort. Aur. ʒi. Rad. Rhab. P. ℈ij. Syr. Zing. q. s. ft. Elect. molle, cujus Sum. coch. min. sing. mat. vel p. r. n.

The doses were varied occasionally, and the medicines, aided by mild tonics and appropriate regimen, persevered in, till the water was evacuated and every unpleasant symptom removed.*

* This amiable lady passed some days at my house, in September 1803, after an absence of more than 10 years from this country, and I had the gratification in finding she had no return of the dropsy, and that she enjoyed better health than before the illness which has been detailed above.

CASE IX.

January 27, 1795.—Mr. Mumford, a farmer of Grotton, Æt. 60. A bachelor, brother to the subject of case 79. Tall, but corpulent, and naturally of a florid complexion. Strongly marked symptoms of hydrothorax; with cough, palpitation at times, and irregular pulse. By means similar to those used in the foregoing cases, occasional blisters to the sternum, and the digitalis, the disorder was kept in check for upwards of two years after my first visit.

CASE X.

March 20.—Mr. Ling, of Stoke by Clare, a butcher, Æt. about 60, extremely fat and corpulent. Addicted to the free use of strong beer and other intoxicating liquors. Extreme dyspnæa; palpitation; cough, with copious viscid yellow expectoration; intermitting pulse, inability of lying down in bed, or of walking quick, without being threatened with immediate suffocation. I suspect water in the pericardium as well as in the other cavities of the chest. Was immediately relieved by squills, the lac ammon. blisters, and the common diuretics; but neglecting medicine and the other injunctions, and persisting in his favorite gratification, he died suddenly a few months afterwards.

CASE XI.

May 31.—Mrs. Bigg, of Glemsford, very fat and short, Æt. 70. Distinctly characterised hydrothorax; with anasarca of lower extremities. All the symptoms almost immediately relieved by the means prescribed; but refusing to persevere in medicine, for more than a fortnight, the disorder returned, and she died a few weeks afterwards, as I prognosticated to her friends, suddenly.

I had hitherto prescribed the digitalis only in an irregular and casual way, and my success was not such as to encourage farther trials. But often observing no sensible effect either good or bad from what I had reason to believe were full doses of it, I began to suspect the quality of the preparations that were used. Accordingly about this time I took some pains to procure the herb genuine, and began to cultivate it in my own garden. The result I have every reason to be satisfied with; indeed it has exceeded my most sanguine expectations. The fortunate issue of the following case, the first that occurred afterwards, induced me to pay still further attention to its preparation and exhibition.

CASE XII.

March 12, 1796.—Mrs. E. Æt. 40, the mother of several children; of a constitution naturally delicate, and much weakened by the cares and fatigue of a large family. Has occasionally consulted me for three years back, for complaints which indicated

great weakness and irritability of the heart and lungs, having been subject to quick, hurried, and difficult respiration, attended frequently with palpitation, or *fluttering*, as she termed it, of the heart, encreased on bodily exertion or emotion of mind. Of this date I find the following memorandum in my case-book: "Symptoms of hydrops pectoris." A blister was directed to be applied to the chest, and some expectorant and diuretic medicines were prescribed which soon removed her complaints.

June 23, 1798.—I find her again on my report book, with the same symptoms, for which similar remedies were prescribed.

July 13.—No relief from the last medicines. In every respect worse. Respiration very much interrrupted, especially on motion, or on lying down in bed. Pulse quick, feeble, and extremely irregular; urine very small in quantity, and high-coloured, with sediment; ankles and legs œdematous. Supposes herself in the fifth month of pregnancy; and there is every reason to suspect the fœtus has been dead for a fortnight, in which period her complaints have made very rapid progress. Has for some months suffered great mental anxiety and uneasiness, from causes unnecessary to state here; to which her present illness is to be attributed.

℞. Dig. Purp. fol. nostr. pulv. gr. j. Confect. arom. q. s. ft. pilul. nocte maneq. cum mistur. infra præs. coch. No. ij. s.

℞. Fol. Dig. Purp. incis. ʒj. Infunde in Aq. ferv. ʒviij. per hor. iv. dein cola.

℞. Infus. Colat, ℥v. Spt. Juniper C. ℥ß. Spt. Æth. Nitr. Spt. Æth. Vitr. C. sing. ℥ij. M.

Particular injunctions were given to discontinue the Foxglove as soon as it produced any of its unpleasant effects.

July 17.—I heard no more of her till the evening of this date, when my immediate attendance was desired. I found her retching violently, and bringing up at times a dark coloured matter, like coffee grounds; the extremities cold; the pulse extremely small, fluttering, and irregular; had frequent faintings, or to use the language of those about her, "they could not keep life in her;" and the body was covered with cold sweats. She had been in this state for several hours: the cause of these alarming symptoms was sufficiently obvious. On enquiry, I found she had experienced immediate relief from the medicines; that the quantity of urine was very much increased; the swellings nearly gone, and that she was considered as mending very rapidly till this morning, when the stomach began to be disordered. I found also that she had been under the influence of the Foxglove nearly two days; yet, in direct contradiction to the directions rigidly enjoined, she was desired to continue it this morning! it was in vain that relief was attempted through the medium of the stomach; for every thing liquid, even in the smallest quantity, was immediately rejected. By an Anodyne Glyster, warm Anodyne Embrocations rubbed into the Epigastrium, Abdomen, and Feet, small pills of solid Opium with Confect. Aromat.; all the

urgent symptoms subsided in a few hours, and I had the pleasure of leaving my patient in the morning quiet and composed.

She continued gradually to mend from this time till about a fortnight after, when she miscarried of a fœtus which bore evident marks of having been dead at the time she apprehended. The water now began to accumulate in the chest and legs with unusual rapidity, and with it all her former distressing symptoms returned.—But although her strength was nearly exhausted, the water was speedily evacuated by the same means; and by a combination of tonics with diuretics, she was restored to health in a few weeks.—She has had no return of the dropsical symptoms, but has had occasional attacks of her former complaints, and always received advantage from medicine. On the whole, her health has been of late years improved.

In every point of view this case will appear interesting: an amiable woman has been rescued from a very alarming state, by a remedy which, by the most flagrant inattention, had nearly proved her destruction.*

The result of this case impressed on my mind so favourable an opinion of the Foxglove, that I determined to direct my attention more than ever to it: from this period it has always formed a part of my remedy in dropsy; and my failures hitherto having been as much owing to the quality of the

* Mrs. E. was living and in good health in November, 1808.

herb used, as to my ignorance of the proper dose and mode of exhibition, I furnished the Practitioner with whom it was prescribed with a portion of the leaves out of my own garden. Having been absent from Britain when Withering's excellent work was published, and for some years afterwards, I had not the good fortune of seeing it at this time, and of borrowing light from so safe a guide.

CASE XIII.

April 19.—Mr. Williams, Æt. 54. A draper and master taylor, very corpulent, with lax fibre; addicted for years to the free indulgence in intoxicating liquors, at all hours; but not often to the degree of absolute intoxication.

Breaths with extreme difficulty, especially when he walks quick, or attempts to lie down in bed. Is often suddenly roused from sleep by a sense of suffocation, pulse very irregular, and intermitting; legs anasarcous; urine small in quntity; high coloured, with copious sediment. These complaints have been coming on for several months. Has been taking the digitalis in small quantities, and other medicines under the direction of his apothecary, for some time, with advantage at first; but the disease has gained ground rapidly of late.

A blister was applied to the breast; the digitalis in powder, oxymel scillæ, warm antispasmodics, and saline diuretics were prescribed, which in about three weeks seemed to remove the serous effusion from every part.

May 21.—With the view, if possible, of eradicating the complaint, the following was ordered.

℞. Scillæ Pulv. gr. iv. Calom. gr. ij. G. Ammon. Sapon. āā. ℈j. M. ft. Massa in pilul. xij. divid. Sumt. duas mane et vesp. cum haust. infra præs.

℞. Oxym. Scillæ ℥ij. Sp. nucis mosch. muc. G. Arab. ā. ℥ij. Aq. Hyssop. ℥iij. Sp. Æth. Vitr. C. ℥i. M. ft. haust.

By the use of these means, with appropriate regimen, which last however was not rigidly observed, the dropsical symptoms were subdued, and his general health was very much improved for two years. But continuing his former mode of living, the water began again to accumulate, and all the former symptoms returned with additional violence.

May, 1798.—I was desired to see him. He had been under the care of the family practitioner for some time; by whom the dropsical symptoms were more than once removed by the same remedies. His constitution, however, seemed now nearly exhausted. Instead of being full and corpulent as I left him before, he was much emaciated, especially the lower extremities, which were likewise extremely cold and of a livid hue, with very little sensibility. He had been confined to bed for some time, and could breathe with perfect freedom; the blood was propelled with so little force by the feeble fluttering contractions of the heart as scarcely to be said to circulate in the more distant parts, so that the pulse at the wrist could seldom be felt; and it was extremely irregular. For many days before

his death, which happened on the 5th of June, his feet and legs as high up as the knees, were of a dark purple hue, perfectly cold, and without any circulation or feeling, the cuticle separating in different parts in gangrenous vesicles containing a dark coloured ichor.

The digitalis in combination with the other means performed every thing that could be expected from medicine; for the dropsy, and even the disposition to it, had been removed for some months prior to his dissolution; but it could not be expected to restore a constitution exhausted by a long and uniform career of intemperance.

CASE XIV.

March 7, 1797.—Mr. Driver, M. Æt. 60. A farmer of the parish of Edwardstone: naturally of a florid complexion, and still corpulent. Has committed occasional excesses, but can scarcely be said to have been addicted to the bottle.

Complains of a sense of distension, oppression, and what he terms a "fluttering," about the epigastrium, with flatus, encreased after eating.—Appetite good.

At this time I had no suspicions of dropsy, but considered the symptoms as arising from dyspepsia, and prescribed accordingly.

March 14.—In every respect worse, the symptoms already mentioned having encreased, with the addition of frequent palpitation, especially on quick

walking. I did not as yet suspect any dropsical tendency. Prescribed under the first impression.

March 19.—He had hitherto come to me; but being now worse in every respect, I was desired to visit him at his own house. He had extreme difficulty in breathing, encreased on the smallest motion; and was threatened with suffocation on attempting to lie down. His pulse was very irregular and intermitting. For a few days the urine began to assume the characters of dropsical urine, and was much diminished in quantity. The ankles were somewhat œdematous. The nature of the disorder seemed now too clearly marked; and I apprehended his life in immediate danger.

Quamp. Admov. Empl. Canth. Sterno.

℞. Mist. Camph. ℥j. Muc. G. Arab. ʒj. Sp. Æth. Nitr. Sp. Æth. Vitr. C. ā. ʒ ß. M. ft. haust. sextis horis s.

℞. Mass. Pilul. Scillæ ʒj. Calom. gr. iv. M. ft. Pilulæ xv. Sumt. ij. sing. noct. et mat.

March 22.—Immediate relief from the blister; and is in every respect amended. Urine encreased in quantity.

℞. Dig. Purp. fol. pulv. gr. ß. Scillæ Pulv. gr. j. Zing. P. gr. ij. Confect. Arom. q. s. ft. bolus sing. noct. et mat. s. Pergat in usu haust. u. a.

I directed the digitalis to be encreased until it produced some sensible effect on the habit.*

* I cannot now account for the digitalis not having been prescribed on the 19th, only by supposing the apothecary had none of it, and waited till I should supply him at my next visit.

April 8.—Urine considerably augmented in quantity and natural in appearance; and all his unpleasant symptoms nearly vanished. No sensible effect on the head or stomach from the digitalis, though it has been encreased to gr. j ß. twice a day.

℞. Scillæ, Digital. P. Zingib. Pulv. a gr. ij. Calomelan. gr. ß. Confect. Aromat. q. s. ft. bolus sing. noct. et mat. cum haust. infra præs. s.

℞. Lact. Myrrhæ ʒj. Oxym. Scillæ ʒij. Sp. Æth. Nitr. ʒj. Kali Acet. gr. xv. M. ft. haust.

April 17.—Continues to improve and to recover strength progressively.—Was desired to persevere for some time in the following medicines; to live well, use much exercise in the open air; to refrain from beer, but now and then to drink gin punch.

℞. Crystall. tart. P. ʒvi. Cinch. Angust. P. ʒ ß. Cons. Cort. Aur. ʒ ß. Zing. P. ʒj. Syr. Cort. Aur. q. s. ft. Elect. molle, cujus Sum. coch. min. ter ind.

℞. Scillæ Pulv. gr. ij. Opii, Colom. āā. gr. ß. Myrrhæ gr. vi. Confect. Aromat. q. s. ft. Bolus sing. noct. s.

In a few weeks he was restored to perfect health, and continued well till March 10th, 1798, when he again applied to me, as will be seen in course.

CASE XV.

April 13.—Miss I. Æt. 50. Has lived a sedentary life for several years. All I find recorded in my note-book of this date is as follows: "Symptoms of Hydrops Pericardii." Pulse very irregular; urine

scanty and high coloured, with sediment on cooling.

℞. Dig. Purp. Scillæ P. a. gr. jß. Zingib. Pulv. gr. j. Confect. Aromat. q. s. ft. Pilula mane et vesp. cum haustu infra præs. s.

℞. Mist. Camph. ℥vi. Solut. Myrrhæ Muc. G. Av. aa. ℥ij. M. ft. haustus.

As far as I could recollect the particulars of the case some months after this period, she had little or no interruption in breathing, except on walking or going up stairs. A peculiar fluttering about the heart, amounting at times to palpitation, with great weakness, a disposition to fainting, and inability of lying down in bed, were the principal symptoms.

By pursuing the above plan for some time, and encreasing the digitalis, until the habit was sensibly under its influence, and afterwards by the use of tonics, all these symptoms gradually disappeared, and she has continued free from any return.*

She consulted me a year or two before this attack, for what appeared to be dyspepsia, and was soon cured.

CASE XVI.

April 16.—Mrs. Newman, Æt. 43. The mother of several children. I only find "Symptoms of Hydrops Pericardii, with general anasarca" in my report-book. After having experienced relief repeatedly from the Digitalis and other means, the

* I heard she died in 1807, whether of dropsy or not I had no opportunity of knowing.

disorder at length resisted every effort that was made to remove it, and proved fatal some months afterwards.

CASE XVII.

May 26.—Mr. Partridge, a farmer, Æt. 74. The uncle of the subject of case 34. A man of short stature, and corpulent. Not addicted to intemperance, but partial to his own old home brewed ale, which I found to be of an excellent quality, but extremely strong. Breathing exceedingly quick and difficult, especially on the least exertion, or on talking; and performed with a peculiar wheezing noise. P. frequent, feeble and intermitting. Countenance in health very florid; but now, especially the nose, very livid. For several days and nights has been obliged to sit up in an elbow chair, being threatened with immediate suffocation when he attempted to lie down. This has occasioned considerable swelling of his legs. Urine very small in quantity, high coloured, with thick sediment. Has been subject to asthmatic cough, with difficult breathing, for some years.

℞. Fol. Dig. Purp. gr. j. Zing. P. gr. ij. Confect. Arom. q. s. ft. bolus mane et vesp. cum haust. seq. s.

℞. Fol. Dig. Purp. incis. ʒj. Aq. ferv. ℥ij. Infunde per hor. iv. dein cola;

℞. Infus. Colat. ℥j. Oxym. Scillæ ʒj. Sp. Æth. Nitr. ʒß. Sp. M. Pip. ʒij. M. ft. haust.

May 30.—Breathing and every other symptom much relieved. Urine encreased in quantity. Three loose motions yesterday and two to day. Pulse still irregular. The digitalis appearing to have produced the desired effect, it was discontinued.

℞. Myrrhæ gr. x. Aq. Pulegii ℥j. Kali Acet. gr. xv. Sp. Æth. Nitr. ʒj. Sp. Menthæ Pip. ʒij. M. ft. haust. mane et vesperi cum Pil. infra præs. No. ij. s.

℞. Scillæ Pulv. gr. iv. Kali Acet. gr. xv. Zing. Pulv. gr. v. Confect. Aromat. q. s. ft. Pilulæ viij.

In about a fortnight more he was restored to his usual health, and continued free from any dropsical symptom during the remainder of his life, which was terminated the latter end of January 1800, by pneumonic inflammation, in which I attended him.

CASE XVIII.

June 5, 1797.—Mr. Carr, of Boxford, Æt. 66, called for my advice.—He was of the middle stature, neither robust nor muscular; not addicted to any excess in drinking; within a few years he had retired from an active business, and lived a sedentary, studious life; but he enjoyed good health before the illness to which he dates his present complaints.

Breathing quick, hurried, and anxious, especially on any sudden bodily exertion or emotion of mind, attended frequently with palpitation, and what he called a "fluttering" about the heart; pulse feeble,

irregular, and intermitting; feet and ankles œdematous towards evening, and readily pitting on pressure; urine natural in every respect; can lie down in bed on either side without any inconvenience; has never been roused from sleep by a sense of suffocation; appetite good; bowels regular; bodily strength much impaired.

About three years since had an attack of Hemiplegia, in which I attended him, and from which he soon recovered; a slight degree of weakness of one side, and distortion of the mouth, only remaining.—In this attack the pulse intermitted, since which it never recovered its former regularity; and he remarked that his breathing had not been so free as before.

Being about to remove to Colchester, his native place, I was glad of the opportunity of committing my sentiments of his case to paper, to his nephew Mr. Newell, a Medical Practitioner of experience and reputation, who resided there; as well as of the plan I thought best suited to obviate present and remote evil.

Having been fortunate in meeting with five well-marked cases of watery effusions into the cavities of the chest, some of which I was now attending, and which were doing well; since the subject of the former case fell under my care; I had no hesitation in predicting the approaches of a serious and formidable disease, namely, serous effusion, most probably, into the pericardium; and that although it might not as yet have commenced, such a morbid

state of the heart existed as would eventually, and, without proper precautions, speedily lead to it.

In addition to the medicines prescribed, I directed a nutritive, chiefly meat diet, with a glass or two of old generous wine at dinner; exercise on horseback daily; diligent frictions to the whole body; in short such a plan of diet and regimen as was likely to give strength and tone to the habit, and to excite an active and vigorous absorption.—He was desired to refrain from malt liquors.

℞. Decoct. Cinchonæ ℥vij. Tinct. Card. C. ℥ß. Sp. Ætheris Vitriolic C. ʒij. M. Sumat Cochlear iij. ampla mane et meridie cum pilul. infra Præs. No. ij.

℞. Massæ Pilul. Scillæ Myrrhæ sing. ʒj. Syr. Tolutan. q. s. ft. Pil. xxx.

The above plan of regimen and medicine was rigidly adhered to, and in his occasional visits to me the amendment in his health was very obvious. In the course of a few weeks he was so far recovered as to obtain my sanction to discontinue medicine; but was directed not to relax in the regimen, and if he should perceive any symptoms of a relapse, to apply for immediate advice.

Not many months had elapsed before his symptoms returned, with the addition of diminished secretion of high-coloured urine; increased difficulty in respiration, and inability of lying down in bed. The digitalis was now prescribed with the happiest effects.

In March 1800, I had a letter from Mr. Newell,

in which he observed,—"Our friend Carr is finely; I have lately experienced equally good effects in two cases similar to his."—After this period I saw him occasionally; he continued to have returns now and then, and the disorder seemed to have assumed more and more the character of Hydrops Pericardii; —but the intervals were longer, and the digitalis never failed to remove them; so that for several years prior to his death he continued to enjoy tolerable health; to use regular exercise; and to make excursions on horseback, to visit his friends in the country.—The latter end of 1806 I last saw him, after an attack of Hemiplegia; and on the 21st of December he died of exhausted constitution, the consequence, it might fairly be said, of a different disease, in the 75th year of his age.

CASE XIX.

June 9, 1797.—Mr. Baker, Æt. 28, M. Extremely fat with a lax fibre. Has been in the habit of drinking beer freely at all times, as is the custom of the country; but not to excess.—"Severe cough, with great dyspnœa," are the only symptoms I find of this date, the first time he applied for my advice. He expectorated with difficulty a viscid yellowish matter; but I had no suspicion at this time of any serous effusion in the chest.

℞. Lact. Myrrhæ ʒij. Aq. Puleg. ʒvß. Sp. æth. Nitr. ʒiij. Sacch. ʒij. M. Sumt. coch. tria ter ind.

℞. Mass. Pil. Scillæ, Myrrhæ, a. ʒj. M. ft. Pil. xxiv, Sumt. tres sing. noct. h. s.

June 17.—The only memorandum I find of this date when he came to me again is the following prescription, from which I presume there were evident symptoms of serous effusion in the cavities of the chest.

℞. Dig. P. fol. Pulv. gr. ivß. Zing. Pulv. gr. vi. Confect. Aromat. q. s. ft. Pil. vi. sumt. duas sing. noct. per tres vices.

℞. Aquæ Puleg. ℥vi. Sp. Menth. Pip. Tinct. Cinnam. Sp. Æth. Nitros. aa. ʒij. M. Sumt. coch. tria ter ind.

June 29.—"Symptoms of Hydrops Pericardii together with general anasarca," are the only remarks I find noted down.

℞. Infus. Dig. Purp. (ʒß. ad ℥viij.) ℥v. Mist. Camph. ℥jß. Sp. Æth. Nitr. Sp. Æth. Vitr. C. aa. ʒij. Muc. G. Arab. ℥j. M. Sumt. coch. tria ter ind.

℞. Fol. Dig. Purp. P. gr. jß. Scillæ P. gr. ß. Opii pur. gr. ¼. Zingib. Pulv. gr. j. Confect. Aromat. q. s. ft. Bolus cum Mist. supra præs. nocte maneque s.

℞. Cryst. tart. Pulv. ℥j. Conservæ Rosæ ℥ß. Syr. Zingib. q. s. ft. Elect. Molle cujus Sumt. coch. duo min. ter ind.

Though the habit was placed under the full influence of the digitalis, and the other remedies were

persevered in, yet the rapid career of the disease seemed not in any degree to be arrested, for the patient died on the 7th July, universally anasarcous.

From the progress and termination of this case, and the extreme difficulty in respiration at an early period, it is probable that serous effusion had commenced much earlier than was at first apprehended. I suspected considerable accumulation of fat about the heart.

Had the digitalis been prescribed at first, blended with calomel, squills, saline diuretics, in full doses, and blisters repeatedly applied to the chest, it is probable the issue would have been very different. Subsequent experience enabled me to ascertain that no advantage was to be expected from the digitalis alone in such cases, where there was universal languor and torpor.

CASE XX.

July 8.—Master Mays, of Halstead, in Essex, Æt. 3.—Universal anasarca, with symptoms of effusion in the chest.—Has been recently much weakened by previous illness.

℞. Decoct. Cort. Angust. ℥v. Sp. Æth. Nitr. ʒj ℈. Syr. Pap. Alv. ℥ ℈. M. Sumt. coch. larg. ter quaterve de die.

℞. Fol. Dig. P. gr. iv. Sacchari pur. gr. vi. Simul tere et divid. in chart. vi. Sumt. 1. mane et vesp.

The child was quickly unloaded of the accumulat-

ed water, by a copious flow of urine: has had no return since, and is now grown to a strong healthy youth.

CASE XXI.

August 31.—Mrs. Simpson, of Melford, Æt. 70. —Very strongly marked symptoms of Hydrops Pectoris et Pericardii; such as quick, hurried, respiration; inability to lie down in a recumbent posture; frequent, feeble, and extremely irregular pulse; defective secretion of urine &c.

℞. Dig. Purp. gr. vi. Zing. gr. iv. Conf. Ar. q. s. ft. Pil. vi. Sumt. 1. mane et vesperi, cum Mist. infra præs.

℞. Aq. M. Pip. ℥v. Kali Acet. ʒj. Sp. Æth. Nitr. ʒiij. Syr. Zing. ℥ß. M. Sumt. coch. tria ter quotidie.

These remedies were soon followed by a copious flow of urine, with speedy relief of every unpleasant symptom, and she was soon restored to her ordinary state of health.

Had occasional returns after this period, even in a more violent degree, and was as often restored to health by the same means. For more than three years before her death the disposition to serous effusion was entirely subdued, though she had a very formidable attack of Pneumonic Inflammation, in which her life seemed in the most imminent danger. She died of the influenza in 1802.

CASE XXII.

October.—Mr. King, of the parish of Belchamp St. Pauls, B. Æt. 30.—Corpulent, yet strong; and naturally of a florid complexion. Has been subject for some years to very violent inflammatory affections, in which copious bleedings and other evacuations were deemed absolutely necessary. In two very formidable attacks of this kind I attended him. The first was in September 1796, and might be said to be a Bilious Inflammatory fever, resembling in many of its features the Yellow fever, as described by Dr. Rush. It was treated in a similar way; and in no instance of fever, that has ever occurred to me, were evacuations so strongly indicated, or attended with more sensible advantage. Aware of the habit of free blood letting which had been previously established, I was desirous, if possible, of overcoming it; and trusted the cure to calomel sometimes blended with James's powder, given at night, and quickened by saline purgatives in the morning, assisted by the antiphlogistic regimen to the fullest extent.

The relief procured by the evacuations was so great, and the necessity for their use so urgent, that at every visit he begged for still more active purgatives. In ten days the fever shewed a disposition to a favourable change; in a few days more he was pronounced out of danger, and continued gradually to recover.

December 19.—My attendance was again desired.

I found he had been ill a week. He had now not only a most violent inflammatory fever, but considerable local inflammation of the lungs, especially about the left side of the chest, deep seated, apparently extending to the substance of the lungs, and even to the heart itself; the left shoulder was likewise much affected, together with severe pains all over the body. Respiration was extremely difficult and laborious; with a peculiar sense of stricture, great anxiety and oppression about the region of the heart. The P. was quick but not full, somewhat unequal and oppressed; T. very brown, foul and dry in the middle, but moist at the edges. Skin very hot and dry, with a yellow suffusion all over the body; eyes were likewise somewhat yellow. Urine small in quantity, dark coloured, with a sediment like coffee grounds. Was let blood this morning, and had a laxative with effect.

The inflammatory symptoms seemed too formidable to be trusted to laxatives and saline medicines alone. I directed him to be let blood to ℥viij; to have saline laxatives with calomel; and to be put under a strict antiphlogistic regimen.

December 20.—Though the medicines operated freely on the bowels, no relief in any respect; and the pulse was much stronger and more regular. The blood had the thickest and most dense buff I had ever observed, assumed the cup like form, and floated in the centre of a full proportion of very yellow serum.

Mitt. Sang. ad ℥xiv. et Pergat U. A.

December 21.—Relief for some hours after the bleeding; but the symptoms returned in the evening with additional violence, especially the affection of the left side. Blood equally buffy with the former.

Iterum sit V. S. et Mitt. Sang. ad ℥xij. et Pergat U. A.

December 22.—While the blood was flowing yesterday all his symptoms were considerably relieved; and I directed the surgeon to take at least ℥xvj; but without any diminution of the fullness of the pulse: the relief however was of short duration, the symptoms returning as before in the afternoon. Apparently much worse to day, pulse 120, and full, but irregular at intervals. After this he was let blood five times the three following days, on the 23d to ℥xij. at noon, and to ℥xvj. in the afternoon; had several evacuations procured from the bowels daily, without any diminution of the hardness and fullness of the pulse, or before there was any tendency to a favorable change. There was no disposition to fainting at any time, though gruel, gratefully acidulated with orange and lemon juice, was the only nutriment allowed him. At every visit he expressed an earnest desire to be blooded, and to a larger extent. The blood was buffy and dense, with yellow serum to the last.

I was aware of the consequences eventually to be apprehended from such inordinate evacuations; yet I was aware also that life must inevitably be speedily sacrificed without them. I am now fully convinced, if the lancet had been at first used with the same

freedom that has been done in many instances of the yellow fever recorded by Dr. Rush, the disorder would have had a more speedy, and ultimately a more favourable termination. But such cases rarely occur in this country; and until I had seen this, I could hardly suffer myself to believe such profuse evacuations could be required in any instance.

When an internal organ labours under violent and acute inflammation, one or two bleedings in the beginning, often save the necessity of the loss of many pounds afterwards, when the vessels have once acquired the confirmed inflammatory action; and they likewise obviate the serious ultimate consequences of effusion of coagulable lymph, or of serum, and adhesion of contiguous surfaces, which generally follow, as most probably happened in this instance, when too long delayed, or when not proportioned in quantity to the urgency of the symptoms.

In the incipient stage of inflammation the blood drawn very often has little or none of the inflammatory character; whereas on the second or third bleeding, it assumes it in a high degree; and if delayed to the very advanced periods, it comes too late, and every drop of blood in the body if drawn, will exhibit the same appearances.

In country practice, serious inconvenience often arises from the physician and apothecary residing at a distance from the patient, and not having it in their power to visit him when their aid is most wanted. Had Mr. King been bled freely on the

first and second day of the attack, it is probable that the copious bleedings which were afterwards used would have been unnecessary, that relief might have been obtained earlier, and that the dropsical state which followed, might have been obviated, or at least protracted to a more distant period.

In about a week after the date of the last report he was pronounced out of danger, and continued gradually to recover. The progress however was very slow, nor did the following spring and summer re-establish his health completely. He complained of unusual languor, and inability of taking moderate exercise without being fatigued and out of breath. His appetite returned, but he had generally a fullness and oppression, with flatulency, after eating. He became corpulent, but his countenance did not recover its florid aspect, nor the muscular fibre its tone.

On the 9th of October he came to consult me. Being unwilling to suspect as yet any serous effusion, I prescribed bitters with mild diuretics, regular exercise on horseback, a nutritive chiefly meat diet, with wine, and a total abstinence from malt liquors which, I was concerned to find, he had indulged in contrary to my former injunctions.

October 13 —Returned to me in no degree amended. I was still willing to hope his complaints arose from debility and prescribed accordingly.

October 17.—In every respect worse; breathing more hurried and difficult, together with a peculiar fluttering about the seat of the heart, and epigastrium,

and other symptoms which left no room to doubt the commencement of effusion in the cavities of the chest, and seemingly in the pericardium, the digitalis was prescribed in combination with tonics and other diuretics; and a blister applied to the chest.

Receiving speedy relief from these medicines he was put on a course of calomel, squills, digitalis, and bitters, combined with alcaline diuretics. Soon after this period he removed to a brothers house a considerable distance from me, and his apothecary dying in the mean time, he never returned home. It having been proposed to consult Dr. Goodwin, in whose immediate neighbourhood he now resided, I was glad of the opportunity of stating my ideas of the case, the remedies which were used, and the subsequent plan which was intended to be pursued, to so respectable a Physician. Our opinions coincided in every respect, except as to the presence of water in the pericardium, which I thought highly probable, from the original seat of the inflammation, from the constant fluttering about the heart, and from the pulse becoming extremely feeble, irregular, and fluttering, from being full, hard, and regular.

He was repeatedly relieved by a plan of treatment similar to that which I recommended, but he survived only a few months afterwards.

CASE XXIII.

February 12, 1798.—Mr. William Smith, Æt. 60. A farmer of thick short make, and fat. Orthopnœa, inability of lying down; P. irregular,

feeble, and intermitting; urine scanty and high coloured; legs anasarcous; severe cough. Having rode the distance of eight miles to consult me, and the symptoms being so extremely urgent as to threaten immediate suffocation, I directed a blister to be applied, and an antispasmodic draught similar to the following mixture to be administered immediately, more especially as he said he could not have the medicines from his apothecary till the following morning.

℞. Myrrhæ ʒj. Mist. Camph. Lact. Amygd. āā. ʒiij ß. Tinct. opii C. Sp. Æth. Vitr. C. aa. ʒiij. Syr. Tolut. ʒij. M. Sum. coch. iij. 8s. hor.

℞. Fol. Dig. Purp. P. gr. jß. Confect. Arom. q. s. ft. bolus sing. noct. et mat. s.

The usual directions were given to Mr. Eastcot, his apothecary. In about a fortnight the dropsical symptoms were entirely removed, the cough was much relieved, in a short period he was restored to his usual health, aud remained free from any return for more than two years. Had two attacks, but was relieved by t e same means, and lived for some years afterwards.

CASE XXIV.

February 18.—Mr. Brown, a shopkeeper, Æt. 60. Similar in shape and stature to, with symptoms resembling those of, the subject of the last case, but refusing to take any medicines he died soon after *suddenly*, as I foretold.

CASE XXV.

May 18.—Mr. Williams, a master taylor, Æt. 55, of a full habit, and corpulent; but with a lax fibre. Addicted to excesses in drinking for several years, and using little exercise. Had the disease very distinctly marked, and was repeatedly unloaded of the water by the foxglove and other remedies, under the direction of the family practitioner and myself.

The most remarkable circumstance connected with this case was, that for some months prior to his death the dropsical habit was not only corrected, but the lower extremeties from being considerably swelled became extremely emaciated, or rather shrivelled; intensely cold, of a dark livid hue, and apparently without any circulation; and for about a fortnight before his death they were perfectly black, void of sensibility and covered with gangrenous vesicles. The hands were cold also; and the action of the heart was feeble and irregular.

CASE XXVI.

July 23.—Mr. Wood, a farmer, of Foxearth, Æt. about 55. Similar in make and constitution, but stouter, to the subjects of cases 23 and 24. The leading symptoms were orthopnœa; palpitation; intermitting, and irregular feeble pulse, together with defective secretion of urine, and some tension, but no fluctuation of the abdomen. Refusing to have the family practitioner to attend him regularly,

and apparently not disposed to conform to any restrictions, I prescribed only simple remedies, and I heard that he died soon afterwards, *suddenly*.

CASE XXVII.

October 22.—Mrs. Wright, of Tilbury, Æt. 35. Apparently in the last stage of phthisis, with general dropsy, and her strength so much exhausted as to be unable to get out of bed. The dropsical symptoms were entirely removed; the cough and other phthisical symptoms so far subdued, and her strength restored, as not only to get out of bed but walk about. She however never recovered her strength perfectly, and she died in December following, suddenly, when she was thought by those about her mending.

CASE XXVIII.

November 5.—Miss Scarling Æt. 60. Naturally of a thin slender make; now much emaciated and reduced in strength. Having had the superintendance of a seminary for female education for several years, has lived a very sedentary life, and scarcely allowed herself sufficient sustenance, to which her disorder is to be attributed.—First consulted me in May 1797, for anasarcous swellings of legs, especially the left, attended with dyspnœa, and a large elastic irregular swelling in the left side of the abdomen, apparently an encysted dropsical swelling. These complaints were nearly removed by Bitters, in combination with saline diuretics and small doses

of calomel. Is now affected with similar complaints, but in a much greater degree. There is a large elastic tumour in the epigastrium, extending to the umbilicus, and someway into the right hypochondrium, and connected by a thick neck with another smaller tumour in the left iliac region. No relief from the bowels for several years without the most active purgatives, which appears to be in some degree owing to a *schirro* contracted rectum under which she has laboured. Urine of late only diminished. P. slow 56 to 58.

In a few days the dropsical symptoms were much relieved, and by the 24th they were not only removed, but the abdominal tumours much reduced in size, by means of the foxglove, saline diuretics, squills, and calomel. The foxglove, however, produced distressing nausea, and more than once vomiting, before its full salutary effects were experienced.

After this period, the disorder returning, she was repeatedly relieved, but her strength by degrees declining she died of exhausted constitution the following winter, which the unusual severity of the weather seemed to have accelerated.

A remarkable circumstance connected with this case was, that while using the foxglove, more especially while under its full influence, the bowels performed their functions without the aid of any medicine which they had not done for some years. This she mentioned with great satisfaction, and as fully compensating for its unpleasant effects.

This case has been inserted in order to shew the

efficacy of the plan recommended in encysted dropsy, and the salutary effects of digitalis in relieving *permanently* a most distressing state of habitual constipation connected with *schirro* contracted rectum.

CASE XXIX.

November 26.—Mr. Walford, a publican, Æt. 28. Extreme difficulty in respiration, as usual encreased on bodily exertion. P. very irregular. Palpitation of the heart at times. Countenance of a livid hue. Legs anasarcous. Abdomen somewhat swelled and hard, with fluctuation. Urine small in quantity, high coloured with sediment. Present symptoms commenced ten days ago, and have rapidly encreased since. Has had attacks of a similar nature for three years, but much less in degree; and was relieved by medicine. Has drank very hard.

Admov. Empl. Canth. pectori.

℞. Dig. Purp. P. gr. j. Conf. Arom. q. s. ft. bolus nocte maneq. cum Mist. seq. coch. ij. s.

℞. Infus. Dig. Purp. (℥j. ad ℥vi.) ℥v. Kali Acet. ℈ij. Sp. Æth. Nitros. ℥iij. Sp. Cinn. ℥v. M.

December 1.—Called upon me to say he found relief the first night from the medicines; that the following day the urine was sensibly encreased in quantity; that the swellings, and with them every unpleasant symptom, gradually subsided, and that his health is in every respect considerably improved. P. quick and still irregular at times; appetite

good; countenance much improved, and he gains strength.

℞. Bals. tolut. ʒj. Calom. Scillæ P. a. gr. vi. Opii gr. iij. Muc. G. Ar. q. s. ft. Pil. xx. Sumt. tres sing. noct. h. s.

He was directed some tonic medicines at the same time.

He called on me several times after this to say he continued in tolerable health. But continuing his former career of intemperance, I was informed, by his surgeon Mr. Tweed, of Bocking, he relapsed and died some months afterwards

CASE XXX.

December 30—Mrs. Stow, a mantua maker, Æt. 40. Has for several years lived a very sedentary life, and of late, has frequently sat up whole nights. Every symptom of confirmed hydrothorax, with anasarca. P. quick and irregular. Urine scanty, high coloured, with sediment. Has had two or three slight attacks of dropsy before, and was relieved by medicine; but the swelling of the legs never subsided; it is now considerable.

Was directed the digitalis and other diuretics; but though she was repeatedly relieved, and the disorder kept in check for some months, yet the dropsical symptoms were never entirely removed. The digitalis excited profuse salivation, and considerable quantities of a watery fluid were brought up in mouthfuls from the stomach without sickness

or exertions to vomit. It was found extremely difficult in this case to act upon the kidneys; and the medicines ceased at length to afford any relief, consequently the swellings of the legs, with every other symptom encreased, and she died not many weeks afterwards, considerable quantities of water having been previously discharged by scarifications. The swellings were hard and tense, a circumstance which is always unfavourable to the operation of the foxglove; but the constitution was exhausted.

CASE XXXI.

March 10, 1799.—Mr. Driver, (vide case 14), Æt. 62. Breathing quick, hurried, and difficult; together with a peculiar fluttering about the scrobiculis cordis and region of the heart. P. extremely irregular and feeble. Urine very small in quantity with reddish sediment. No swelling of legs. Appetite and strength much impaired of late. No thirst; B. natural.

Has remained free from any dropsical or other complaint since I attended him in 1797, till a fortnight ago, when, on walking quick, he perceived his breathing short and difficult; but it became free and easy on rest. Of late, however, it is more or less affected at all times, and he is unable to lie down in a horizontal posture.

This attack appears to have proceeded from a violent cough he had five weeks ago, from cold, added to disappointment and anxiety of mind which

he has suffered in consequence of being turned out of his farm.

℞. Dig. Purp. P. gr. viij. Scillæ P. gr. vi. Calomel. gr. jß. Simul tere et Conf. Arom. q. s. ft. Pil. viij. Sumt. 1. sing. noct. et mat. cum haustu seq.

℞. Myrrhæ gr. x. Aq. Menth. Pip. ʒx. Sp. Æth. Nitr. Mell. Scillæ aa. ʒj. Kali Acet. gr. vi. M. ft. haust.

As he purposed removing the following day a considerable distance from me, I furnished him with full directions in regard to regimen and medicine; to continue the use of the foxglove and to encrease it if necessary till the desired effect should be produced.

I heard from his friends that he soon recovered; and that he continued free from return more than twelve months afterwards when I last had any tidings of him.

CASE XXXII.

March 13.—Mr. Clark, of Melford, Æt. 83. Great Dyspnœa, not uniformly violent, but at times, even on rest, returning in Paroxysms. P. extremely irregular. Urine very scanty, high coloured, with sediment. Legs anasarcous, great stupor and drowsiness, and talks incoherently at times.

Had a blister applied to the sternum this morning, and has been taking the digitalis in combination with other medicines, under the direction of his surgeon.

Has been subject for years to dropsical affections; especially of the chest.

Was directed to take the digitalis in infusion, by means of which he was in three days completely unloaded of the accumulated water by a copious flow of urine; but he died soon after of completely exhausted constitution.

CASE XXXIII.

March 22.—The Rev. Mr. Larwell, a dissenting minister of Redgewell in Essex, Æt. 70. Extremely fat and corpulent, of short stature, with a lax fibre. Has been temperate in the use of strong liquors through life; but used little exercise of late. Incessant cough, with very copious but viscid yellowish expectoration; extreme dyspnœa, aggravated on the slightest motion. Unable to lie down in bed for some days. Countenance approaching to a livid hue. P. regular but oppressed. Urine scanty, very high coloured with reddish sediment. His complaints seem to have originated in a violent cold he caught five weeks ago; since which time he has coughed with more or less violence.

℞. Bals. Tolut. ʒij. Muc. G. Arab. ℥ij. Mannæ ℥j. tere simul. Aq. Cinnam. ℥xj. Mel. Scillæ ℥j. Sp. Æth. Vitr. C. Sp. Æth. Nitros. āā. ℥ß. Kali Acetat. ϑij. M. Sumt. coch. duo 3tiis. vel 4tis. horis.

℞. Dig. Purp. fol. P. gr. viij. Conf. Arom. q. s. ft. Pil. viij. Sumt. 1. nocte maneq. Appl. Empl. e Pice Burg. pectori.

A particular friend of the patient being desirous

of knowing my opinion of his case, the letter which I wrote to him, expressive of the imminent danger I thought him in, and of my doubts and fears as to his recovery, was by mistake delivered into the worthy pastors own hand: he read it without emotion, and with a firmness and composure of mind, which convinced me that he was not unprepared for the change which I feared was not far distant.

He experienced speedy relief from the medicines, and by persevering in their use for some time his health was perfectly re-established, a slight cough in the winter season excepted.

Being at Sudbury in May 1800, he called on me, and confirmed the above intelligence. He was then remarkably corpulent, though he used cyder for common drink, having interdicted the use of all malt liquors. I found him, however, with the remains of his winter cough, expectorating freely a yellowish matter. Though he did not come for my advice, yet apprehending a return of his former formidable complaint without due care, I thought it incumbent on me to bestow such salutary admonitions as appeared necessary. I advised a stimulating plaster to the breast, and a mixture similar to that formerly prescribed with so much advantage.

That there was water effused in the cavities of the chest in this case, it is presumed, admits not of doubt; and that this happened without disease of any thoracic viscus, is equally certain. It serves to shew in a striking manner the power of medicine in a constitution previously sound, and not exhausted

by intemperance, even at the age of 70, and under the most unpromising circumstances.*

The violent cold or catarrhal affection was here evidently the occasional cause, operating on a habit powerfully predisposed by extreme corpulency and laxity of fibre, as has been mentioned in the history.

CASE XXXIV.

March 30.—Mr. Partridge, of Bures, Æt. 49. M. Nephew of the subject of case 17. Extreme difficulty in respiration, encreased on the least motion, or on talking, attended for the most part with a peculiar wheezing noise. Has great tightness or sense of stricture and oppression across the chest. P. irregular, feeble, and frequent; it may be called a quick succession of weak irregular vibrations. Urine very scanty, high coloured, with a copious pink coloured sediment. Has been obliged to sleep in a chair for a fortnight, in consequence of which his legs especially the left are much swelled, and pitting on pressure. A small degree of tumefaction of the abdomen also. Whole face, especially the lips and nose, of a livid hue. Eyes dull, heavy, and expressive of great suffering; the conjunctiva somewhat yellow. Very little thirst. Appetite much impaired, as is his general strength. Was taken ill three weeks since with nearly all these symptoms, which have gradually encreased since; of late very rapidly.

* Mr. L. was living and in good health in December 1808.

Has taken no medicine except a powder the 28th, which purged him violently, and a spermaceti mixture, his disorder having been considered as gout, to which he has been subject both in a regular and irregular way from eight years of age, and which appears to be hereditary. The gouty paroxysms have at times been very severe, and the leg now principally swelled has suffered the most. Has lived temperately. No cough.

Appl. Empl. Canth. pectori.

℞. Dig. Purp. fol. P. nostr. gr. viij. Zing. P. gr. vi. Conf. Arom. q. s. ft. Boli viij. Sumt. 1. sing. noct. et mat.

℞. Bals. Tolut. ℈ij. Muc. G. Arab. ʒij. Mannæ ʒß. tere simul. Aq. Menth. Pip. ʒvjß. Sp. Æth. Vitr. C. Sp. Æth. Nitrosi aa. ʒiij. M. Sumt. coch. tria 6ts. horis.

April 4.—Immediate relief from the blister; and in the course of the following day, the 31st ult. the urine began to flow in encreased quantity, but still high coloured with sediment, and he was able to lie down in bed. On the morning of the 1st, had five loose watery stools; but nevertheless the urine continued to encrease considerably, and became perfectly natural in appearance: in the course of the day the swelling of the legs was nearly subsided: when it began to lessen, in the morning, he complained of very acute pains in them. Breathing now perfectly free; yet he still complains of some tightness across the chest. P. much more regular. Water since last night less in quantity, and deposits

a sediment, but he has drank less. Countenance greatly improved; appetite perfectly restored; and he sleeps as usual in bed. No sensible effect from the digitalis except in encreasing the flow of urine, and once on the bowels. The weather so intensely cold that he is prevented from going out and deriving advantage from air and exercise.

Appl. Empl. e Cymino inter Scapulas, et Empl. Canth. Alt. pect. si urgent dyspnœa, nec non,

℞. Dig. P. P. gr. xij. Zing. P. gr. viij. Conf. Arom. q. s. ft. Boli viij. Sumt j. mane et h. s. U. A.

Pergat in usu misturæ ter ind.

April 8.—Being alarmed by the appearance of unusual symptoms he desired my immediate attendance. He complained of being extremely faint, and low, with giddiness and imperfect vision since yesterday. These were evidently the effects of the digitalis, having taken the last bolus this morning. In other respects was sensibly amended.

Omitt. Dig. sed,

℞. Decoct. Cinch. Ang. ℥vij. Myrrhæ ʒj. Tinct. Gent. C. ʒiij. Sp. Æth. Nitr. ʒij. Kali pp. ʒß. M. Sumt. coch. tria ter ind.

April 22.—Called on me to say that he continued in every respect free from dropsical symptoms; the legs being restored to their former state; the urine in full quantity; appetite good; and strength much improved, though the weather has been extremely unfavorable for his riding on horseback, as particularly enjoined. Both the plasters were applied, and the mixture persevered in since last report.

Was caught in a hail storm four days since, got wet, and has had some cough, with dyspnœa. P. irregular.

℞. Calom. gr. vi. Scillæ gr. iv. Digit. gr. x. Myrrhæ ℈j. simul tere et Adde G. Asæfæt. ℈ß. Extr. Gent. q. s. ft. Pilulæ xviij. Sumt. duas sing. noct. h. s.

June 8.—Again came to me. Says that till a few days back he continued tolerably free from complaint; that his urine has diminished in quantity, with the usual sediment; that he has a slight cough, some difficulty in breathing, and a pain of the right side and breast. Looks well in the countenance, has no thirst; nor do the legs swell. Appetite and strength, however, somewhat impaired.

℞. Scillæ Pulv. gr. x. Dig. Purp. ℈j. Myrrhæ ʒj. Simul tere et Confect. Aromat. q. s. ft. Pil. xxiv. Sumt. duas meridie et hor. viij. P. M. cum Mist. seq. coch. iij.

℞. Infus. Gent. C. ℥vij. Kali pp. ʒj. Sp. Æth. Vitr. C. Sp. Æth. Nitr. a ʒiij. M. ft. Mist.

Si Urgeat Dyspnœa Iterum Appl. Empl. e Pice Burg. Sterno.

The above symptoms were quickly removed, and he enjoyed his usual state of health till the autumn of 1800, when he again consulted me, as will be seen in course.

CASE XXXV.

April 8.—Mr. Loudon, a carpenter, Æt. 65. Confirmed genuine Hydrops Pectoris, with severe

cough; an irregular intermitting pulse; legs beginning to be œdœmatous, and last night for the first time unable to lie down in bed. He was naturally of a strong robust constitution, but having passed many years in the army, worked hard at his business for the last twenty years, and drank freely at times of malt liquors, his constitution may naturally be supposed to have suffered.

Appl. Empl. Canth. Sterno.

℞. Dig. Purp. P. gr. vj. Zing. P. gr. xij. Confect. Arom. q. s. ft. Pil. vj. Sumt. 1. mane et h. s.

April 11.—Came to me in every respect much amended; the cough and breathing being relieved, the expectoration less in quantity, but more free and easy; he was able to lie down in bed the whole of last night without inconvenience. Urine very copious. P. still intermitting, but not so much so. Ankles only swelled towards evening. Pergat.

April 13.—So far recovered as to think himself able to return to his work. Slightly under the influence of the foxglove. Omitt. Med.

This poor man having no means to support himself and family but by his labour, as soon as he found the symptoms removed returned to his work, but after some time relapsed. He was thus repeatedly relieved by medicine, and as often relapsed. At length, however, his constitution being overcome by such repeated attacks, he was confined to the house from the beginning of August, and died in September. As an opportunity was given me of inspecting the body after death, I shall mention the

leading symptoms of the disorder for a few weeks prior to his dissolution.

In May he had a most formidable attack, attended with violent fever, incessant cough, and copious yellowish expectoration, with an aggravation of every other symptom. He was confined to his bed for several days, but contrary to my expectations recovered so far as to be able to return to his usual occupation in June, free from every dropsical symptom.

July 21.—I prescribed the following pills for him.

℞. Dig. Purp. fol. P. ʒ ß. Calom. Scillæ Pulv. āā. gr. xij. Simul tere et Confect. Arom. q. s. ft. Pilulæ xxiv. Sumt. 1. sing. noct. h. s.

The first few doses affected him with the most distressing nausea, faintness, intense *burning* heat, followed by profuse sweating over the chest, which, he said, "he thought would have killed him." I was much surprised at this effect, as he had taken the digitalis alone in larger doses, without any inconvenience, and when his strength was equally reduced. The medicines continued to produce similar effects afterwards though in a less degree.

From the beginning of August his bodily strength gradually declined, and all his painful symptoms encreased in proportion; yet these did not appear to proceed from encreased accumulation of water, but apparently from extensive confirmed desease of some of the thoracic viscera. He had complained throughout of pain and distressing sense of weight, across

the chest. These were now more constant and violent, especially about the middle of the sternum. The cough which had never left him entirely, was extremely harrassing, sometimes with copious expectoration, at others without any. The breathing was extremely difficult and laborious; the pulse small and frequent, without any regular strokes. The whole chest, neck, sometimes the head, (but seldom any other part of the body), were generally covered with profuse sweats preceded by intense heat; yet the extremities were generally cold. The urine was scanty, high coloured, with thick sediment. The appetite was various, even a few days before he expired, he said he relished food. He was unable to lie down on either side: the posture I always found him in, was with his chest elevated, *half sitting*, inclining to the right side. In short he exhibited a picture of extreme distress and suffering for some time before his dissolution, which happened the 5th of September. Two days prior to his death he brought up a large quantity of pure florid blood.

DISSECTION.

Mr. Anderson who attended with me during his illness, and with his usual humanity afforded him every assistance, very obligingly at my request opened the body. On opening the cavity of the thorax the right lung did not collapse in the slightest degree: it was observed to adhere universally to the pleura costalis, except in two places of no great extent, which were filled with yellow serum: neither

did it recede from the ribs on separating the adhesions, but continued to fill the cavity. On cutting into its substance, it was hard and solid, resembling a schirrus liver in colour and consistence; the pulmonary artery was ossified in many places, but not until it had performed several ramifications. On the surface of the lung between its external covering and parenchymatous substance were two distinct sacs, the one containing about an ounce, the other an ounce and a half, of a yellow serum; in its interior substance was a small cyst about half an inch in diameter which contained a gelatinous like viscid substance; and in the upper part was found a considerable quantity of frothy mucus.

The left lobe had no adhesions, but contracted only to about half the natural size, on the admission of the external air. It was firm and solid in the general texture, and in one place as much so as the right lung. There were no vomicæ or abscesses in either. The left cavity cotained by measure rather more than a pint and a quarter, of a yellowish fluid, which on exposure to the air for some time became of a gelatinous consistence. In the pericardium were more than two ounces of a similar fluid, but which did not, as far as I recollect coagulate. Firmly attached to the left side of the mediastinum were several soft fleshy appendiculæ, indented like a cocks comb. The heart was very soft and flacced, seemingly preternaturally large; and at the basis of each of the semilunar valves were small ossifications, but apparently not of sufficient extent to interrupt

their functions. The right sinus venosus and cavity of the auricle, were unusually large, and the latter as well as the right ventricle formed one continued cavity, the auricular opening being nearly as large as either cavity, the functions of the tricuspid valves having been thereby apparently destroyed. The opening into the pulmonary artery likewise, as well as the trunk of the artery itself seemed preternaturally large, and the coat of the vessel was thin. The semilunar valves however were perfect.

Nothing unusual was found in the cavity of the abdomen. The gall bladder, as frequently happens, was very much distended with thick yellow bile.

CASE XXXVI.

March 4.—William Jones, Æt. 18, a hairdresser's apprentice. Breathing very short and difficult especially on motion. Pulse quick but regular. Urine very scanty and high coloured. Abdomen somewhat swelled with obscure fluctuation; legs anasarcous; his body very much emaciated, great prostration of strength. Appetite good. B. regular.

Had a violent rheumatic fever six weeks ago. The present complaints gradually supervened on his beginning to sit up. Pains in the hypogastric region.

℞. Dig. Purp. gr. j. Zing. gr. ij. Confect. Ar. q. s. ft. bolus sing. noct. et mat. s.

Was directed to drink a pint of gin punch, acidulated with ʒij. of crystals of tartar, daily.

March 9.—Increased flow of urine the first even-

ing after beginning his medicines, which has continued since, with nearly complete reduction of the swelling of the abdomen and legs, and entire freedom in breathing. Was desired to omit the digitalis but to continue the punch and to return to me in a few days.

March 15.—Dropsical symptoms entirely removed.

℞. Cinch. Angust. P. ℥j. Cryst. Tart. Pulv. ℥ß. Zing. P. ʒj. Cons. Cort. Aur. ℥ß. Syr. Zing. q. s. ft. Elect. cujus Sumt. nucis mosch. mag. ter ind.

From this time he continued to mend progressively, and he was in good health some years afterwards.*

This may be said to be one of the most favorable cases of dropsy which occurs, the subject being young, and the disease arising from general debility after acute fever.

CASE XXXVII.

The subject of the following case was a hard working industrious labouring man; and it is proper to observe that he had to encounter every privation likely to defeat the success of the means which were used for his relief. He was very scantily supplied with food and every necessary; and being unwilling to apply to the parish, to which he belonged, for either medical or other aid, he had no medicines except those with which I furnished him.

* I saw him in January 1809.

It is probable that the case would have terminated otherwise than it did had he been fortunate in having every assistance his situation required. He laboured hard too at his work for some time under his disorder.

ANASARCA PULMONUM.

May 16.—John Ruggles, Æt. 54. Naturally of a strong constitution. Breathing extremely laborious but unusually slow; can lie down, at first without much inconvenience, but after being some time in bed, it becomes more difficult, and he is obliged to get up frequently, but not suddenly, in order to obtain relief. His face and neck are so much swelled, and his features consequently so much distorted, that though he had sometimes worked for me I did not recognise him. The swelling is encreased towards morning, when his breathing is somewhat relieved; but after being up some time the former lessens while the latter becomes more difficult. The whole body is likewise anasarcous. The legs are tense and hard, of a livid hue, and not readily receiving or retaining the impression of the finger; the swelling being evidently of that kind which Dr. Withering has very justly said to be unfavorable for the exhibition of the foxglove. Urine high coloured, but without sediment, he thinks in the usual quantity. P. full, 66 and regular. B. in a natural state. Appetite good, but says "he has

not room for his victuals." Has been ill five months, but derived occasional benefit from some simple remedies prescribed by his neighbours. Of late these have failed, and he has been getting worse rapidly.

In this case the *Anasarca Pulmonum* seems very strongly marked; and there is reason to suspect disease of the adipose membrane, perhaps throughout the body: in instances similar to the present, where the cure is, I believe, always difficult, I have had strong grounds for believing that the above cause constitutes this difficulty.

I was desirous of putting the truth of Dr. Witherings remark still farther to the test by giving the digitalis alone in this case. Accordingly he was supplied with eight powders of gr. jß. in each, and directed to take one evening and morning.

May 20.—Urine, he says, was encreased the two first days; but now thinks it is diminished in quantity. Has been subject to giddiness which he says is now encreased. P. 54 and full. Pergat.

May 22.—No farther effect from medicine.

℞. Calom. gr. iv. Scillæ gr. j. Cryst. Tart. Pulv. ℈j. M. ft. Pulv. e Mell. tant. ter in Sept. s. Pergat in usu Digit.

A few days after this he came to me to say that the day after taking the first calomel powder a salivation came on, which soon encreased to a most profuse degree. It differed in many respects from that arising from mercury; there being no fætor of

the breath; no swelling, tenderness, or inflammation of the gums; and considerable quantities of a watery fluid came from the stomach without any exertion to vomit, which continued for several days.

Did this arise from the application of the calomel to the extremities of the salivary ducts? or from the digitalis? or from both? It seems to have been produced solely by the digitalis.

The mercurial powder was not repeated, but after a lapse of some days, the digitalis was resumed with the addition of other diuretics, which relieved him so much that he did not come to me again till,

August 6.—Complains of severe dry cough and hoarseness, with great dyspnœa. Anasarcous swellings of late encreasing. P. full and regular. Sumt. Tinct. Digital. (Nostr.) gt. xx. ter ind.

August 14.—A good deal relieved. P. 60, and more oppressed. Vision impaired; frequent nausea and retching, without bringing up any thing. Great faintness at times. Urine not encreased. Pergat.

August 19.—Has continued the drops without interruption, and been more or less sick with efforts to vomit ever since last report. B. more open, which he says relieves the sickness much. Profuse salivation for three days; but he thinks the clear liquid which is copiously thrown out comes chiefly from the stomach but not during the retchings. P. 46, soft and perfectly regular. Violent throbbing of the whole head. Appetite good. Breathing somewhat relieved but still difficult. More urine for the last 24 hours.

Finding that the digitalis alone produced no good effect, after this period, he was prescribed a combination of this with other active diuretics, which at one time unloaded him so completely, and relieved all his symptoms, that he engaged himself with a neighbouring farmer for the harvest; but he soon found himself unequal to any laborious exertion, and returned to me several times afterwards: he however derived only temporary relief from medicine, and his strength as well as his spirits gradually declining, he at length swelled to an enormous size, and died the latter end of October or beginning of November.

I am persuaded from subsequent experience that a combination of calomel, squills, crystalls of tartar largely diluted, in full quantity, would have been the only remedy likely to ensure success in the above case, and with proper diet and attention it is probable his life might have been protracted for some years.

CASE XXXVIII.

July.—Mrs. Moss, of Assington, about 35 years of age. Has had for some years a very foul ulcer on one leg. Symptoms of anasarca pulmonum, together with general anasarcous swellings, especially of the lower extremities. Was ordered the digitalis in the form of boluses, with ginger and Confect. Aromat. and was completely unloaded of the water in a few days, and permanently cured; for when I saw her lately she told me, and her countenance confirmed the assertion, that she was

in good health, and had no return of the dropsical complaint since. She was very much under the influence of the foxglove, complaining of distressing nausea, faintness, giddiness and imperfect vision for some days.*

CASE XXXIX.

July 22.—Mary Golding, the subject of the following extraordinary case and dissection, was first brought for my advice about six years ago. She was then 11 years old. Her breathing was short and difficult, attended with occasional palpitation of the heart; the pulse was small and irregular; the whole body always chilly; the face pale and sallow, resembling that of a person under confirmed chlorosis. The chest, especially the left side, was very much distorted, the lower part of the sternum being protruded outwards, the spine curved, the left side much larger, and the ribs more circular than the right. The bodily strength and flesh were much reduced, yet the appetite remained unimpaired. While examining the chest my attention was engaged by an incessant throbbing of the right side, in a parallel line with the natural seat of the heart. The emaciated state of the body enabled me to ascertain with certainty that this really arose from the heart, the alternate systole and diastole of the auricles and ventricles being very perceptible. On enquiring into the cause of this singular phe-

* July 1808, in health.

nomenon, I was informed that a year and a half before, in consequence of a fall from a waggon, she received a violent blow on the pit of her stomach, soon succeeded by great difficulty of breathing and fever, which confined her to bed for ten days; that about twelve months afterwards a painful swelling appeared on the left side of the *cartilago ensiformis*, from which period she dated all her present symptoms. It being obvious that the heart was not only displaced, but highly probable also that there was a morbid change of structure of the other thoracic viscera, to which the interrupted respiration and circulation, the distortion of the chest, and other symptoms were to be attributed, I thought the case beyond the reach of medicine, and that her end was not far distant. This opinion I communicated to the mother, requesting at the same time to be apprised of the fatal event, whenever it happened, which I thought would be suddenly. I directed her to be kept quiet and still, to avoid all violent exertions, to be supplied with mild simple nutriment; and prescribed a tonic chalybeate medicine.

She was brought to me some months afterwards, and I was surprised to find she had received considerable benefit from the means recommended. This, however, was not of long duration, and the complaints already enumerated were now sensibly encreased. She was repeatedly brought to me after this period, and every time there was a sensible encrease of her sufferings, as well as of the distortion of the chest.

For several months prior to her dissolution, during which time I frequently visited her, although she suffered no acute pains, yet her situation was truly distressing. From an early period of her illness she could neither lie on her back or the right side. When, forgetting her former sufferings, she attempted either, she was threatened with immediate suffocation; and latterly the smallest inclination of the body either backwards or towards the right side was productive of similar effects.

In the last month of her existence she was obliged to sit up constantly in a chair, and sought repose by resting her left elbow and head on a pillow placed on a table before her, near the fire; and though all the movements of her body were performed with great caution and deliberation, yet such was the difficulty in respiration, so often was she threatened with suffocation, and so constant was the palpitation, though now much more obscurely felt, that every day, nay every hour, was expected to be her last. The whole body was always chilly, and the extremities, especially the lower, up to the knees, were intensely cold, of a dark livid hue, and to use the mothers expression "were dead a fortnight before the rest of the body." The feet and legs were likewise considerably swelled, and a quantity of serous fluid was discharged from a sore on one of the great toes. The pulse which was always feeble and extremely irregular could not be felt for the last fortnight; the livid aspect of the face, and indeed of the whole body, sufficiently demonstrated that the

blood circulated with force scarcely sufficient to support life. The appetite continued unimpaired to the last; yet such was the pressure on the œsophagus that repeated efforts were generally made before any food could pass into the stomach; and the same pressure being applied to this organ, it was often thrown up without any sickness or action of vomiting. In the efforts and struggles to swallow she had often been nearly suffocated, owing to the food remaining for some time in the œsophagus; and it passed suddenly into the stomach with a peculiar wheesing noise, which could be distinctly heard by those standing by. From these causes the habit received but very little nutriment, for a great length of time; and for the last week she was supported only by the smallest quantities of liquids. The urine was latterly much diminished in quantity.

She had never menstruated, nor had she attained to much more than half the size of a full grown healthy subject of moderate bulk at the age of seventeen years. She died on the 21st.

Permission having been obtained to open the body, Mr. Anderson, who frequently visited her during her illness, being equally desirous with me to ascertain the cause of her singular complaints, was so obliging as to conduct the dissection.

On viewing the body before we proceeded to examine the internal organs, the distortion of the chest was more distinctly observed than before death. There was a considerable tumour in the epigastrium which protruded the lower end of the

sternum and *scrobiculis cordis* a considerable way outwards, and descending as low as the umbilicus. The sternum, as well as the spine, was curved towards the right side. The left side of the chest was nearly double the size of the right, the ribs being proportionably elongated, and anteriorly much more convex than natural.

On laying open the abdomen, the swelling already mentioned was observed to be the left side of the diaphragm, nearly as thin and transparent as a bladder, thrust down not only as far as the umbilicus, but filling the whole of the left hypochondrium, and extending half way into the right, the stomach and liver being pushed down below the umbilicus. The liver was extremely small, firm in its texture, and paler than natural. All the other viscera were sound also, but unusually small and pale. On removing the integuments of the thorax, the cartilaginous extremities of the left ribs were softer than natural. When divided, and the left cavity laid open, it was filled with a cyst of considerable size, adhering in several places to the pleura, but not to any considerable extent to the diaphragm. No traces of the heart or left lung could be discovered in any part of this cavity: on passing the hand under the sternum along the sac these and the mediastinum were found, thrust about two thirds of the way into the right cavity. We attempted to detach the cyst from its adhesions, and to remove it whole; but being very thin and transparent, this was found impossible. Two or three openings were unavoidably made in it,

through which some of the fluid escaped, which prevented accurate measurement; but we obtained near two gallons of a fluid that was nearly transparent; and within its cavity was a very thick, but soft, spongy substance of a whitish colour, which appeared to have been in some places loosely attached to its internal surface, and to be an encrustation formed by the coagulable lymph, probably at an early period.

On opening the right side the lung collapsed to its natural size, seemed free from disease, without adhesions to any part; and there was but just room for the hand to pass between the mediastinum and the ribs. The heart and lungs were, as might naturally be expected, extremely small.

The whole contents of the thorax were carefully separated and transmitted to Mr. Cline, (with a short sketch of the history of the case), who favored me with the following report.

" I am very much obliged to you and Mr. Anderson for the extraordinary morbid lungs which I received some time since."

" From a careful examination of the parts, it appears that the origin of the disease was the formation of hydatids in the inferior lobe of the left lungs, which by gradually encreasing had produced that large membranous bag. The heart and lungs appeared to have undergone no other change than such as might be expected from great pressure, and thereby interrupting their functions. I have sometimes met with hydatids in the lungs but in no case

like the present, therefore the parts are carefully preserved."

"This case serves to illustrate how the most important organs may be altered in their situation by gradual pressure, without producing speedy death."

A case is related by Hoffman, vol. 7. Obs. vii. p. 471, in which near 7 lbs. of water were found in the left cavity of the chest, after death: it was originally contained in a sac, which burst in a fit of laughing three days before death. The left foot, leg, and thigh only, together with the scrotum, were swelled.*

That the origin of the immense cyst which occasioned the train of symptoms described in the above case, and ultimately the death of the patient, is to be referred to the violent blow which preceded her illness, can scarcely be doubted.

The precise manner in which this happened, or the part where it first commenced I had no opportunity of ascertaining, being unwilling to injure the parts by a minute examination, choosing to reserve this for far more able hands. It is probable, however, that the foundation was laid in the lower part of the left cavity of the chest, where the cyst was attached to the diaphragm, this being near the part where the blow was inflicted, though the strongest adhesion was in the upper part.

This case exhibits in a striking degree the wonderful powers and resourses of nature in protracting life under the greatest possible interruption of the functions of the most important organs, when very

* Vide Appendix No. ii, case 2.

gradually induced and when unaccompanied with positive disease of these organs. The peculiar circumstances under which this happened and continued for so great a length of time are extremely interesting, and highly deserving the attention of the Physiologist. The pressure on the heart and lungs, especially the left lobe, were such as to admit only of a very imperfect and feeble circulation through the body; of which the paleness at first, afterwards the livid colour and coldness of the face and whole body, the extremely irregular and weak pulse, were sufficient proofs. Hence if the pressure on the œsophagus and stomach had not prevented a quantity of nutriment adequate to the ordinary purposes of health from being taken, her life would most probably have terminated much sooner; it being obvious that had the digestive organs supplied materials for a full portion of chyle, the lungs could not have transmitted the quantity of blood which would thus be formed, even under a more free and vigorous action of the heart. Death therefore from sudden plethora, apoplexy or suffocation, must have speedily followed. But in proportion to the diminished capacities of the pulmonary vessels, and action of the heart, in consequence of pressure, the supply of food to the stomach and chyle to the blood were lessened also by the same cause; and thus a due equilibrium between the quantity of blood generated, the power of the heart in propelling it, and capacity of the lungs for receiving it, was preserved throughout. The blood too being thin, poor,

and pale from imperfect oxygenation, the heart would consequently be less stimulated, the growth of the body would necessarily be interrupted; every organ be preternaturally small; the body would be at first pale, afterwards cold and livid; and life was naturally prolonged from these causes, though in a state of feeble existence, for so great a length of time.

Had the real nature of this case been suspected at an early period, I cannot help thinking that relief might have been procured by art. The habit was in every respect such as promised a happy result from the use of digitalis, which, together with a combination of steel, myrrh, and the kali pp. would most probably have acted on the lymphatics, provided this artificial cavity was supplied with a sufficient number of these vessels, like the natural cavities of the body. If medicine failed it was a favorable case for the paracentesis.

CASE XL.

March 8.—Mrs. O. of Sudbury, Æt. about 60. A very fat short corpulent woman; has for some years lived a sedentary life, seldom going out in the summer, and never in the winter. Has been ill some weeks, and taking for some days small doses of digitalis from the family practitioner, but without any sensible effect. Breathing very difficult and laborious, encreased on any bodily exertion; preventing her lying down. Abdomen encreased in size, but without fluctuation. Urine scanty, of a dark colour, with corresponding thick sediment.

Legs somewhat swelled, but hard. Appetite unimpaired. No thirst. Pulse full and regular.

℞. Infus. Dig. P. (℥j. ad ℥vij.) ℥vj. Tinct. Card. C. ℥ij. Sp. Æth. Nitr. Sp. Æth. Vitr. C. ää. ℥ß. M. ft. haust. bis ind. mane nempe, et h. s. cum bolo. seq. s.

℞. Dig. P. P. gr. j. Nitr. pur. gr. iij. Conf. Arom. q. s. ft. bolus.

The digitalis, after being for sometime under its influence did not act readily on the lymphatics. Squills and small doses of calomel, with other diuretics, were afterwards blended with it, by means of which the dropsical symptoms were removed in a few weeks;—have not returned since.*

CASE XLI.

September 5.—B. Myall esq., of Castle Hedingham, in Essex, Æt. 58. Very corpulent. Till within a few months has enjoyed good health; lived well; indulged freely in the use of strong beer, to which he has been in the habit of adding large quantities of sugar; and committed occasional excesses. Apparently in the last stage of hydrothorax, of which the following are the leading symptoms.

Respiration performed with extreme labour and difficulty, so as to be unable to walk a few yards, or up stairs without the greatest caution, and without stopping several times, supported by two persons. He is frequently obliged from a most distressing sense of weight and stricture across the chest,

* Mrs. O. was in good health in January 1809.

to make several laborious inspirations, in which he raises his neck and head erect, with his mouth open, and throws his arms above the head, apparently with the view of assisting the intercostal muscles to elevate the ribs, and thus enlarge the capacity of the chest. Though he has been unable for some time to lie down, and compelled to seek repose at night as well as in the day with his shoulders very much elevated, yet he is often suddenly roused from sleep by a sense of suffocation, for some minutes after which, his recollection of events recently passing before him, as well as of persons about him, is lost, and he talks incoherently. These paroxysms have of late occurred so often, and been so alarming, that the family practitioner has been repeatedly sent for and sat up with him whole nights, apprehending every hour would be his last. Even when sleeping in his chair in the day time, these happen, though in a less violent degree. Legs anasarcous in a considerable degree, the swelling in the evening extending above the knees; the skin is transparent, readily receiving, and for some time retaining the impression of the finger. The feet are not cold at any time, as very generally happens; the pulse is full, hard, regular, and 90.* Intense thirst at first, but now less. T. dry, brown and furred. B. open. Counten-

* In the history of the disease, it has been observed, that when the pulse was full and regular, and when consequently the blood was propelled with due force to the extreme parts, the feet and legs retained their natural warmth, though the cellular substance was loaded with water.

ance swollen and bloated; not of a livid hue, nor cold, but expressive of extreme suffering. Constant drowsiness, but no natural sleep, being hurried and interrupted. Urine natural both in quantity and quality since the commencement of his illness, nor has it been influenced in either respect by any medicines he has taken.

The above complaints commenced some months ago, first with general languor and weakness, soon succeeded by œdœmatous ankles and interrupted respiration. Had a severe cough in January last, during which he vomited some blood; and his strength was thereby much reduced, to which, and to his having for some years suffered great anxiety and uneasiness of mind from the loss of a female relative who lived with him, added to some bodily fatigue in conducting his extensive concerns, the present illness may be in a principal degree attributed.

I had never prescribed for any part of this gentlemans family before, having been for many years attended by a physician of extensive practice, and justly acquired reputation. In the present illness he had repeatedly seen him. Two other physicians, of respectability, had likewise prescribed for him; but no impression having been made on his disorder, and not even temporary relief having been procured by the various means that were recommended, his case was now regarded by all as hopeless, and he had for some time no other attendance than that of the family surgeon and apothecary. In this deplo-

rable state he was earnestly entreated by a neighbouring friend to repair without delay to Bath, in order to place himself under the care of Mr. Tikel, who, as an inducement it was said, had recently cured admiral B. of a similar disorder. The 6th, or the day subsequent to my visit was actually fixed for his departure, when a friend of mine accidentally called on him on the 4th. He requested I might first be permitted to visit him; and so bent was he on his journey that my immediate attendance was in consequence desired. I could not however see him till the following day.

From the situation in which I have described him I presume I shall be acquitted of having discharged my duty in disuading him from yielding to the solicitation of his kind friends until some more favorable change took place in his disorder. I hesitated not to say, what indeed seemed obvious to all those constantly about him, that so far from being able to reach Bath, he would in all probability never get to London, having been for several days threatened every hour wiih suffocation. My confidence in the plan which I had in so many instances practised with success, was now such that I promised speedy relief of all the urgent symptoms; yet I think it right to say, that I gave no encouraging hopes of permanent recovery.

Besides the urgency of the symptoms described there were other circumstances unnecessary to detail here, on which my prognostic was in some degree founded.

He had been for some time desired to drink large quantities of strong beer, brandy and water, and various cordials, together with æther and laudanum, in order to remove the violent spasms with which he was supposed to be affected.

I directed him to refrain from all malt and other strong liquors; to have a generous nutritive chiefly animal diet; to drink a few glasses of sound old wine at dinner; to have gin punch acidulated with cream of tartar, and besides to indulge freely in other diluting liquors; to lie with his shoulders more elevated than usual; to ride out as soon as he was able, to use frictions with camphorated oil to his legs; and prescribed as follows.

Appl. Empl. Canth. satis Amplum pectori.

℞. Infus. Dig. Purp. (℥j. ad ℥vj.) ℥j. Sp. Æth. Vitr. C. Sp. Ætheris Nitrosi a ℥j. Kali Acet. gr. xv. M. ft. haust. cum Pilul. seq. sing. noct. et matutinis sum.

℞. Fol. Dig. Purp. gr. j. Kali. Acetat. gr. iij. Confect. Aromat. q. s. ft. Pilula.

August 8.—At 6 P. M. saw him.—Did not begin his medicines till the 6th at noon. The following evening the urine was sensibly augmented; and he has since voided four times the usual quantity, about 8 pints by measure the last twenty-four hours. The quantity as well as frequent propensity to void it has alarmed him, fearing he may have a disorder no less dangerous entailed upon him. In every respect very considerably relieved; his breathing being now perfectly free, and having no drowsiness,

or starting up from sleep since I saw him. Countenance much improved in its aspect. Contrary to my injunctions however he had been too liberally supplied with strong brandy and water, and has had no gin punch. P. 72 and full. T. dry and brown with more thirst. Legs less swelled and softer. Two motions daily. Slight nausea; but this appears to proceed from his having ate a full meal of goose for dinner. Pergat. U. A.

August 10.—5 P. M. Urine has continued to flow profusely with proportional relief of his breathing and every other symptom. Can now lie down in bed, and enjoys sound uninterrupted sleep, without ever being roused as before. Swellings nearly gone this morning, but now returned about the feet and ankles in a slight degree. Imperfect vision at times, with frequent nausea, sense of faintness and sinking of the stomach; but his appetite continues to improve. T. moist and clean and no thirst. B. regular. Pulse from 56 to 60 and much softer.* On the whole has mended rapidly since last report.

℞. Dig. P. P. gr. j. Scillæ Pulv. Calom. āā. grß. Kali Acet. gr. iij. Conf. Ar. q. s. ft. bolus mane et hor vij. P. M. cum haustu seq. s.

℞. Infus. Gent. C. ʒx. Tinct. ejusd. ʒjß. Kali Acet. ℈i. Sp. Æth. Nitr. ʒj. M. ft. haust.

* As the pressure on the lungs, from the absorption of water, is lessened, and the transmission of the blood through them is consequently facilitated, it is seen that the contractions of the heart become less forcible.

August 13.—Has continued to improve in every respect since last report. Was a good deal under the influence of the digitalis yesterday and day before, having sickness, languor, faintness with imperfect vision, which to day have been less, the digitalis having been discontinued. No swelling of the legs in the morning, and but little in the evening. Urine continues in full quantity, though, as the swellings have subsided and the breathing has been relieved, it is much less than before, there being evidently no superfluous moisture to absorb. In every other respect improving, P. 80 and soft. The additional frequency of the pulse may be attributed to his having rode some miles in a post chaise, and partly to the digitalis having been withdrawn. I directed his feet and legs to be bathed evening and morning, in a solution of salt water at first tepid but by degrees cooler, and at length quite cold.—To adhere strictly to regimen.

Pergat in usu haust. et hac nocte encipiet sumere bol. e Dig. Purpur. U. A.

August 16.—Continues to improve in every respect. No sensible effect on the habit from the digitalis. Urine in full quantity. B. always open.

℞. Dig. Purp. P. gr. viij. Calom. Scillæ, a. gr. iv. Myrrhæ ʒj. Confect. Arom. q. s. ft. Pil. xxiv. Sumt. duas ter ind cum haustu seq.

℞. Decoct. Cinch. flav. fort. ʒx. Tinct. Gent. C. Sp. Æth. Nitr. aa. ʒj. Kali Acet. ℈j. M. ft. haust.

Appl. Empl. Canth. Sterno.

August 19.—Progress very rapid since last re-

port. Scarcely any swelling of legs even at night, and says he is much stronger. Finding his breathing perfectly free, the blister was not applied. I directed it, however, to be applied this night by way of precaution. Discovers a great reluctance in persevering in medicine, and does not take it punctually. Augeatur Decoct. Cinch. ad ʒxiv. sing. haust. et pergat. U. A.

August 22.—Rode to Sudbury; and he continues to improve. Some days since had slight swelling of hands, which is now gone. Blister rose well. Directed flannel rollers to his feet and legs, after they are bathed. I now discontinued my regular visits, earnestly requesting he would persevere with unremitting attention in the regimen and medicine recommended.

October 11.—I was desired to see him. Has for some days been getting worse, having at times had sickness and bilious vomiting, but evidently not from the digitalis, as he has taken very little of this or any other medicine since last report. His nights are extremely restless, yet though he frequently gets up in bed his breathing is free. Urine natural. Little or no swelling of the legs. Appetite and strength somewhat impaired. P. 84 and full. Thinks he caught cold. Objects to, and indeed refuses to take medicine in a liquid form.

℞. Vini Ipecac. ʒß. Aq. M. P. ʒß. Pulv. Ipecac. gr. vj. Vini Ant. ʒj. M. ft. haust. Emet. quamp. sum.

℞. Dig. P. P. gr. jß. Canellæ Alb. P. gr. iij, Kali Acet. gr. vj. Tinct. Benz. C. q. s. ft. bolus sing. noct. et mat. s.

October 13.—Rather worse. Breathing begins to be affected in a recumbent posture, or on quick motion, and he complains of a most distressing febrile restlessness with thirst. Emetic operated well. B. costive. P. 96 and full. The necessity of medicine strongly urged.

℞. Calom. gr. iv. Aloes, gr. v. Kali Tart. gr. iij, probe Simul tere et Confect. Arom. q. s. ft. bolus quamp. sum.

℞. Infus. Dig. P. ℥j. Sp. juniperi C. Sp. Æth. Nitr. Aceti Scillæ, a ʒj. M. ft. haust. mane et h. s, cum bolo seq. s.

℞. Dig. P. gr. j. Calom. gr. ß. Confect. Ar. q. s. ft. bolus.

October 16.—Laxative bolus operated kindly. Almost immediate relief from the draughts and boluses: and he has since been able to lie down in bed, and to sleep sound. Thirst and febrile restlessness gone. Urine encreased in quantity the last 24 hours. Acknowledges he has been considerably better, especially since yesterday. Being evidently under the influence of the foxglove yesterday it was omitted. Sickness less to day, P. 76 and softer.

℞. Mist. Camph. ℥j. Kali Acet. ϑj. Sp. Æth. Nitr. Acet. Scillæ Tinct. Gent. C. a. ʒj. M. ft. haust. hac nocte et eras mane s. et vespere incip. Sumere med. die 13 præs.

November 7.—His complaints having fluctuated as before, having taken his medicines and conformed to every restriction very irregularly since last report; and finding the journey to Bath had been again mentioned to him, in my late visits I strongly encouraged it. The swelling of the legs had been for some time subdued, and there being every reason to believe the serous effusion in the chest had been removed, the exercise, variation of scene, and the amusement of the journey, therefore, promised to be productive of more advantage to him. I had another object in view likewise. Persuaded in my own mind that neither the Bath waters, nor any medical assistance he might have in that city, celebrated for men of eminent talents, were likely to prove of any essential service to him, I was desirous of convincing those *officious* friends who had taken the lead in directing his movements of the same. Of this I apprised his brother, a very sensible and intelligent man who was to accompany him. Accordingly, after furnishing them with the necessary directions they set out this day.

November 23.—Returned home yesterday, after a residence of about a week at Bath, without deriving any benefit either from the journey or the medicines that were prescribed for him. His nights are extremely restless and hurried, his mind being greatly agitated at all times, but especially in the course of the night. Appetite not much impaired. P. quick; and he has frequent thirst. Dr. Parry prescribed

saline diuretic medicines, which however produced no diuretic effect, but he thought relieved the febrile restlessness for the first two days. Dr. P. and Mr. Tikel discouraged his staying at Bath.

I directed a blister to be applied to his breast, and to return to the digitalis and squills, with the addition of crystals of tartar, which for a time relieved him very materially.

Having a natural aversion to medicine, and finding, after repeated trials, that relief was only transitory, he at length refused every thing in the shape of medicine; became extremely peevish, fretful, and impatient of every restraint; his strength gradually declined, and after having several convulsive paroxysms for the last few weeks of his life in which he remained for some time totally insensible, he died on the 2d of February 1800, of completely exhausted constitution. Latterly he could lie down in bed without any difficulty in respiration, from which I had reason to believe that not only all the water in the cavities of the chest was removed, but that the disposition to its farther effusion was corrected.

CASE XLII.

September 11.—Mr. Stearn, Æt. 57, of the parish of Waldingfield. Of a very full and corpulent habit. For some years has been subject to plethora for which he has been repeatedly let blood with relief. Of late has suffered great mental uneasiness and anxiety, in consequence of his having had un-

expected notice from his landlord to quit his farm, which appears to have contributed in a very great degree to his present illness.

Breathing extremely quick, hurried, and anxious, expecially on walking &c. For six months has been unable to lie down on the right side, though formerly he always lay on this; and for a fortnight has been obliged to have his shoulders raised very high in bed, owing to a most distressing sense of suffocation and palpitation which he experiences if he attempt to lie down. Has a sense of weight and oppression at times, under the sternum, with a peculiar fluttering or a sense of sinking as if his life were going, at the pit of the stomach. P. by accurate measurement 152, extremely small, fluttering, and irregular. Urine very scanty, high coloured, with copious thick reddish sediment, not more than half a pint in 24 hours. B. in general very loose; but now regular. Appetite and strength much impaired, and he frequently vomits up his food. T. slightly furred, with thirst. Has been subject to coughs in the winter season for some years, and last winter and spring had a severe attack attended with short difficult breathing. Countenance swollen or bloated, of a livid hue, and expressive of extreme suffering. Ankles only slightly œdœmatous, but his lower extremities have been remarkably cold for some months.

The present symptoms commenced about a month ago, but for the last fortnight, have increased rapidly, although he has had regular medical attendance.

Has in general lived well and used much exercise, but not addicted to excesses. Had a blister applied to the sternum on the 8th, which procured only temporary relief.

℞. Dig. P. P. gr. j. Kali Acet. gr. iij. Conf. Arom. q. s. ft. bolus mane et vesperi cum haust. seq. sum.

℞. Infus. Dig. Purp. (℥j. ad ℥vj.) ℥j. Sp. Æth. Vitr. C. Sp. Æth. Nitr. a ℥j. Kali Acet. gr. xv. M. ft. haust.

I directed him to live on light animal food; to have wine in moderate quantity; gin punch for drink, and no beer.

I had no doubt but that in this case there was water in the pericardium as well as in the left cavity of the chest; and as the situation of the patient appeared imminently hazardous, I requested his surgeon and apothecary, who came to my house with him, to conduct him home as soon as possible, and that I should visit him again on the,

14.—On the night of the 12th, after taking three draughts and as many boluses, the urine began to flow more freely, and in the course of the following twenty-four hours, he voided about six pints of nearly transparent water, without any sediment; and it has continued in the same proportion since, with remarkable relief of every distressing symptom. Towards the morning of yesterday, he could lie down in bed, and on either side; and he lay in a recumbent posture the whole of last night without any inconvenience, which he had not done for six

months. Breathes with perfect freedom, and goes up or down stairs as when in health. Countenance much improved in every respect. P. from 80 to 84, more firm but still irregular and intermitting, though much less so than when I first saw him. T. clean and moist. Appetite perfectly restored, and he feels himself already stronger. Two motions daily. Legs as to swelling the same, but have recovered their natural warmth since the urine began to flow freely. Has at intervals a troublesome dry cough. Besides his regular meals, I directed him to take a glass of sherry, and a crust of bread with a slice of cold meat, at noon; to bathe his feet and legs in a saturated solution of salt in water, to use frictions to them afterwards; to have the blister kept open, or rather a weak one applied, and to continue the medicines a day or two longer, or until the habit should be in a slight degree under the influence of the digitalis, when, as I invariably do, I desired it might be withdrawn; and I fixed the 17th for my next visit.

The morning after my visit, however, the aspect of things suddenly changed for the worse: he was seized with general languor, weakness, faintness, and coldness, which encreased rapidly till his death, which happened either in the evening or the following morning. As I had not an opportunity of seeing the medical practitioner who attended with me, and who saw him some hours prior to his death, for several months after this unexpected event, I regret not being in possession of the particular circum-

stances which preceeded it. Candour, however, obliges me to declare, that I think the digitalis was continued too long, that its powerfully sedative effects co-operating with the sudden depletion of the cavities that were before considerably distended, and the proportional removal of pressure from off the heart, lungs, and large arterial trunks, may have contributed to the fatal event of this case. It is probable however there may have been a polypus concretion in some of the cavities of the heart, as the symptoms bear a striking resemblance to those mentioned by authors in which polypi were found after death. Though the digitalis had produced no visible effect on the habit, yet there was ample evidence of so full an operation on the lymphatics and kidneys that no hazard ought to have been incurred by persisting in its use after my first visit on the 14th. Two doses only had been taken after this period; yet had my injunctions been rigidly observed, none ought to have been used; as the patient began to be affected a few hours after my departure, though his symptoms did not assume a serious aspect till the following morning.

While I have thus, I hope, candidly stated the error which I apprehended to have been committed in this case, I may now be suffered to affirm that this was the only one which occurred in my practice, either in hydrothorax or any other species of dropsy, where there was reason to suspect this medicine of any injurious consequences. And I have been the more particular in detailing its symptoms, which

were committed to paper as delivered by the patient in the presence of his surgeon apothecary, as a caution to the young practitioner not to persist in the use of the medicine after the urine has flowed profusely, although the habit be not otherwise affected by it.

The history of the following case appears so interesting, and the symptoms of effusion in the pericardium, as well as the other cavities of the chest, so strongly marked, that I have thought it worthy of being recorded, though the patient died, before the medicines, which were prescribed, reached her.

CASE XLIII.

October 27.—Mrs. C. of the parish of Hartest, Æt. 35. Of very short stature; and prior to her present illness corpulent, with a lax fibre, and always of a delicate constitution which has been considerably encreased since her marriage by frequent parturition and abortions, succeeded generally by profuse pale menstruation and leucorrhœa. Respiration short, quick, and anxious, encreased on the smallest mental emotion or bodily exertion. While describing her symptoms as I sat by her bed side, it was exceedingly quickened and interrupted, so as to oblige her to pause frequently; she every now and then sighed, or rather made a sudden full inspiration in order to recover her breath. On first going to bed, or on inclining backwards in a chair, the difficulty in

breathing is considerably encreased, but after some time it is somewhat relieved, provided her shoulders are very high. In the act of turning from the right to the left side, she has a peculiar sensation about the heart as if a fluid were "pouring or dropping from a vial," and she even thinks she can hear it at times as if passing from one part to another. Constant fluttering, or weak palpitation. P. 108, feeble, unequal, but not intermitting, and varying considerably in frequency by the exertion of talking. Complains of a sense of numbness, alternating at times with pain, of the shoulders, extending down the arms. Urine for several days very scanty with reddish sediment. Legs anasarcous; and one hand was œdœmatous a few days since, but this now gone. Extremities, especially the lower, very cold, as indeed is the whole body, without due precautions. Her face has been in general pale and sallow, but of late it has assumed a leaden aspect, the lips being of a darker hue. T. very pale, dry and clammy, with intense thirst. Bodily strength and appetite very much impaired, having been chiefly confined to bed for some days, and unable for some weeks to eat solid nutriment.

Has had at different times for a few years back slight attacks of dropsy, together with enlargements of the liver and mesenteric glands; also frequent diarrhœa and lientery, which were considerably relieved by medicine; but the same causes being more or less constantly applied, it is probable they never were completely subdued.

Soon after the surgeon apothecary who attended with me left her, symptoms of dissolution came on suddenly, in consequence of which a messenger was dispatched for him, but she died before he reached her.—Leave was not given to open the body after death.

CASE XLIV.

November 8.—Mrs. H. of Lavenham, Æt. 43. The mother of six children, the last four years old. No menstruation for seven months, from which she dates, and to which she attributes her present illness. Together with the ordinary symptoms of hydrops pectoris, in a striking degree, there is a constant violent throbbing of the heart, carotids, and at the pit of the stomach, encreased considerably on motion, or on attempting to lie down; yet the pulse is weak and very irregular; great coldness of the face and extremities, together with general chilliness: A dry cough.

Her complaints have been gradually coming on since she ceased to have children, but of late only have they assumed their present formidable aspect; and they are now making rapid progress.

Her constitutional strength being nearly exhausted, without any appetite for food, the relief experienced from medicine though at first considerable, was not of long duration. She died some weeks afterwards. I saw her only once.

CASE XLV.

December 1.—Master Sewell, Æt. 3. A few wecks ago had universal dropsy, of which he was nearly cured, when he was attacked with measles three weeks since: was nearly recovered from these when he was suddenly seized with very violent cough attended with fever and extreme difficulty in breathing. These symptoms have continued without much interruption for about ten days. P. extremely quick; T. and lips very dry, and covered with a dark brown incrustation; takes very little nourishment; B. costive; pupils much dilated; head seems preternaturally large; feet generally cold though the heat of the body is encreased; comatose for the most part.

Had a blister applied between his shoulders a week ago, and an enema administered last night. I suspect water in the head. As every kind of medicine had been refused, I directed five drops of the Tinct. Dig. P. to be given in any drink or food that might be taken, three times a day, the dose to be gradually encreased, and a blister applied to the breast.

December 14.—The family practitioner writes me he is mending.

December 28.—Reports him to be perfectly well; is in doubt whether his recovery is to be attributed entirely to the Tinct. Digitalis or not; as he appeared better a few days after my visit; but says he was much quieter, slept better and longer after taking it.

January 8, 1800.—Was desired to see him. On enquiry I was informed that his appetite returned

soon after my last visit, that of late it was craving and voracious, that it was freely indulged, and that his body encreased proportionally in size, though not in strength. His general aspect resembled more that of a person at the age of 40, oppressed with bloated fat, than that of a child three years of age. His countenance was much swollen, bloated, and of a livid hue, as was his whole body, but the head and abdomen were larger in proportion. His breathing was extremely difficult and laborious, especially after eating. B. regular, and urine in full quantity. He was brisk and lively at intervals, but was totally unable to walk, his legs not having strength to sustain the great weight of his body. Flesh or rather fat soft and flabby.

By having him frequently drawn about in the air in a carriage made on purpose, by constantly presenting amusing objects before him, and thus diverting his attention from food, the quantity was gradually reduced, the redundant fat was absorbed, the body was strengthened, while its bulk was proportionably reduced, he was in a few weeks restored to perfect health, and is at this time* a strong healthy youth.

CASE XLVI.

January 17.—Miss Harrison, Æt. 41. Tall and slender. Being a mantua maker, has for the most part lived a sedentary life. Subject for several years in the winter season to severe attacks of cough

attended with great dyspnœa, and copious yellowish viscid expectoration, which have gradually encreased in violence every succeeding year. Breathing at all times affected by slight causes. Some weeks ago was attacked with unusual severity, and for more than a fortnight the symptoms have been extremely alarming. Her expectoration is now evidently purulent, very copious, and mixed with a viscid yellow mucus. Breathing extremely difficult, together with a sense of stricture and oppression across the chest, and inability to lie down in bed. P. 112, and very feeble. Urine small in quantity, high coloured with reddish sediment. Great debility, and no appetite. Profuse sweats break out on the fits of coughing.

Having repeatedly prescribed for this patient before, I apprehended these attacks would eventually lead to dropsy of the chest, and for the most part prescribed the foxglove in combination with such other remedies as were deemed necessary, both with the view of preventing this, and relieving present symptoms. This medicine was productive of much benefit, of which she was so sensible, that she always kept a vial of the tincture, and to which she invariably resorted on any return of cough or dyspnœa.

My predictions were now fully verified, and so alarming did her situation appear as almost to preclude all hope of relief from medicine; yet by the following means aided by appropriate regimen she was restored to her usual state of health in a few weeks.

℞. Tinct. Benz. C. ʒij. Muc. G. Arab. Mannæ āā. ʒjß. tere simul, Aq. Menth. P. ʒvijß. Tinct. Dig. P. g. 40. M. Sum. coch. tria 4tis hor.

℞. Fol. Dig. Purp. P. Opii aa. grß. Muc. G. Ar. q. s. ft. Pil. sing. noct. h. s. s.

January 22.—Urine encreased in quantity; expectoration more free, copious and improved in appearance. Cough and difficulty in breathing proportionably relieved. P. 108.

Mist. olim præs: Adde Tinct. Dig. P. gt. xx. et Pergat U. A.

January 24.—Began the mixture with Tinct. Dig. only yesterday, and is already affected with slight nausea and impaired vision, which she knows by former experience arises from the digitalis. Symptoms much as before.

February 2.—Expectoration much less purulent; more free, copious, and thinner. Sometimes brings up from the lungs mouthfuls of a thin frothy mucus without coughing or any difficulty, which I attribute to the digitalis, under whose influence she has been more or less since last report; the dose has been varied accordingly. She has likewise taken an anodyne at bed time.

Omitt. Haust. Anod. Pergat in usu Mist. Balsam: cum Dig. P. pro re nata.

From this period Miss H. continued gradually to mend, and by the beginning of the summer she thought herself returned to her usual state of health.

The following winter, however, she had a similar attack, attended with purulent expectoration, and

more strongly marked symptoms of serous accumulation in the cavities of the chest. The legs became œdematous, and the secretion by the kidneys was still more defective, assuming more the characters of dropsical urine. From this and from several attacks equally alarming she was rescued by similar means. At length, however, her constitution being gradually undermined, she was taken ill in the winter of 1803, in the usual manner, and was suffocated by the quantity of pus and viscid mucus which accumulated in the bronchial vessels.

CASE XLVII.

January 31.—Mr. Boldero, a grocer, late of Bury, now of Cavendish, Æt. 36, B. Has all the symptoms of hydrothorax very strongly marked. The most peculiar are, a violent throbbing of the heart, and corotid arteries; a strong hard tense, but regular pulse, 124 in a minute; a severe dry cough; a pain, and sense of great oppression about the epigastrium, extending to the right side, much encreased after eating; extreme restlessness at night; appetite not much impaired; bowels generally costive. The disorder began to assume its present character about three weeks ago, since which time it has advanced very rapidly.

Has been in the habit for some years of losing blood from the arm three or four times, and of taking salts six or seven times, every summer, for a drowsiness he has been subject to, always with relief. Last summer was let blood only once, and

discontinued the salts entirely. Had a blister to the chest with temporary relief.

Of late has lived a more sedentary life than usual.

Sit V. S. et Mitt. Sanguis ad ℥vj. et Rept. si Opus ft. Appl. Empl. Canth. inter Scapulas.

℞. Kali pp. ʒ ß. Succi Limon ℥ ß. Aq. ʒvj. Sp. Æth. Nitr. Mell. Scillæ aa. ʒj. T. Dig. Purp. gtt. xx. M. ft. Haust. ter ind. s.

℞. Calom. pp. gr. j. Kali Vitr. gr. iv. Muc. G. Arab. q. s. ft. bolus sing. noct. h. s. s.

The usual directions were enjoined with respect to diet, drink, &c.

To the sudden transition from an active to the sedentary life of a shop, and the discontinuing the evacuations to which he had been long accustomed, the disease is in this case to be attributed; and as there was reason to suspect disease of the liver, and organic affection of the heart, I held out no hopes of permanent relief.

February 2.—Immediate relief from V. S. pulse softer and less frequent. Blood was not buffy, nor firm; a very large proportion of serum. Urine not much encreased in quantity. Directed half a grain of the Pulv. fol. Dig. to be added to each bolus, and the same quantity of opium if the bowels should continue too lax.

February 25.—Finding himself almost well after pursuing the above plan for about 12 days he discontinued his medicines. For some days has been getting sensibly worse. The throbbing of the heart

is so violent as not only to be seen through his clothes but to be distinctly heard by a person sitting near him. It extends to the carotids and epigastrium. Urine high coloured with sediment but not much diminished in quantity. Meeting him on the 23d, on horseback on his way to call on me, I directed another blister to be applied. Is now so ill as to require my attendance at his house. P. 94, extremely hard.

℞. Infus. fol. Dig. P. (℥jß. ad ℥viij.) ℥x. Kali pp. gr. xv. Sp. Æth. Nitr. ℥j. M. ft. Haust. mane et vesperi s.

℞. Calom. Opii a. grß. Kali Vitr. gr. iv. Conf. Arom. q. s. ft. bolus sing. noct. h. s. s.

March 6.—Speedy relief from the bolus and draught prescribed and taken on the night of the 25th, having slept without being roused once, the whole night; voided much urine of the natural colour next day; in a few days every unpleasant symptom vanished, in so much that he thought himself again almost well. The digitalis having produced sickness and reduced considerably the frequency of the pulse, with an intermission every tenth stroke, together with heaviness, giddiness, and drowsiness, it was laid aside, and tonics substituted. The pulse was observed to be from 10 to 15 strokes slower in the afternoon than in the morning; having as before taken his medicines very irregularly he is again worse.

Tonics with Diuretics, Calomel, and Digitalis had been taken and varied according to circumstances.

It is remarkable that while taking the medicines he says his urine is less in quantity, higher coloured, and with more copious sediment, and that it becomes more natural on laying them aside.

April 13.—Since last report has fluctuated much, having been sometimes considerably relieved, at others worse: of late the disorder has evidently gained ground. Pulse now intermits frequently; but the regular strokes are very strong and hard. Feet and legs began to swell some time since; and the swellings are now very considerable, extending to the thighs. No thirst; urine not much diminished, of the natural colour, and without sediment. Has a very hard tumour in the epigastric region, extending to near the umbilicus and some way into the right side. The action of the heart and large arteries is so violent as to agitate the whole chest, so as to be seen distinctly through the clothes, and to give the swelling the appearance of a large aneurismal tumour. I consider this tumour as an enlargement of the liver, which most probably existed from the beginning, and together with every other symptom of this singular case, tends to confirm the prognostic delivered at first, that no lasting benefit was to be obtained.

Bitters, Diuretics, Digitalis, Calomel and Opium in various combinations, were continued.

April 18.—Since the 16th has been much better, able to lie down in bed and sleep sound; breathing very much relieved. P. regular, but very full.

Urine as usual high coloured with copious sediment while taking medicine. Tumour as before.

℞. Ung. Hydrarg. fort. ℥j. Camphoræ 3j. M. Inung. Epig. et Hypoch. Dextr. nucis avellan. mag. sing. noct, h. s.

℞. Cryst. Tart. P. gr. vj. Calom. gr. j. Opii gr. jß. Fol. Dig. P. Pulv. gr. ij. Muc. G. Arab. q. s. ft. bolus sing. noct. h. s. s.

April 21.—Since the 18th has coughed up large quantities of thick florid blood, with much viscid phlegm; on the 19th had a violent pain of one side, which is now abated, and was hot and feverish last night. Pergat U. A.

April 26.—The Calomel was encreased on the 23d to gr. ij. Homoptysis less, and he thinks himself much better. Mouth affected. Expectorates much viscid mucous. Tumour softer and more flat. P. hard and tense. Urine much encreased in quantity and without sediment. Continues to lie down, to sleep well, and to breathe with freedom in every posture Takes four grains of the Digitalis daily without any apparent effect.

Aug. Dig. ad gr. ij. ter ind. sed min. Opium ad gr. j. h. s. Mitt. Sang. e brachio ad ℥iij.—iv. vel vj.

May 2.—The blood was not sizy; continues to mend; mouth sore; the blood expectorated is darker; has taken two grains of Opium and two of Calomel daily. Pergat U. A.

May 6.—Opium and calomel reduced to half the

quantity, and the ointment discontinued for two days, his gums and mouth being worse; now better. Very little expectoration of blood. Urine natural; some purgative motions; pulse full and quicker; in every respect better but gains no strength. Swelling of legs and thighs much reduced.

Iterum Inung. U. A. et Sumt. Opii et Calom. aa. gr. j. sing. noct. h. s.

Digitalis not mentioned in this report.

May 22.—Has been getting weaker since last report; but in other respects very little alteration except that the tumour is larger. Urine in full quantity. B. costive. Mouth still sore. Swellings nearly gone. Appetite good, but much oppressed after eating. Has been taking for some nights a bolus of Digit. P. gr. vj. Opii gr. j. Calomel. gr. iij. Appl. Empl. Canth. Epigastrio.

A tonic diuretic mixture, and a bolus with Calomel, Opium, and Crystalls of tartar h. s. were prescribed.

May 30.—Since last report has been getting gradually worse. Eyes, whole body, and urine, of a deep yellow colour. Tumour soft and nearly gone. P. regular. Died soon after this; leave was not obtained to open the body, though I very much wished it.

On a review of the above case, I could not help thinking that, had bloodletting been used largely at first, and repeated occasionally; had the plan laid down been conformed to more regularly, and the habit charged with mercury in the beginning, life

might have been protracted much longer, though a permanent cure could scarcely be hoped for. I suspected from the first some serious mischief about the heart and lungs, as well as disease of the liver, before this last shewed itself externally. There seemed at the same time every reason to believe that the violent action of the heart was in some degree occasioned by the pressure of the tumour on the aorta, as well as by some organic mischief within the chest.

This case fully verifies Dr. Withering's observation, "that the digitalis seldom succeeds in men of great natural strength, of tense fibre, of warm skin, of florid complexion, or in those of a tight chordy pulse."

Although the habit was repeatedly under its full influence the urine seemed not encreased by it; and it rendered the pulse intermitting.

CASE XLVIII.

February 7.—Mrs. Smith, of Thurlow, Æt. 45. Of a very delicate constitution, and the mother of several children, the last four months old. Has all the symptoms of the disease very strongly marked. The breathing is so much impeded as to prevent her from walking or lying down in bed without being threatened with immediate suffocation; has constant palpitation; the pulse is small, extremely irregular, and intermitting: legs and feet œdematous, though she has been confined to bed for some time owing to extreme weakness. After her last lying-in, her

strength was much reduced by a profuse lochial discharge, about ten days after which she was seized when in bed with violent palpitation, which continued with short intermissions for some time without any dyspnœa; at length the breathing became so much affected that she is often suddenly roused when awake as well as when asleep. No preternatural thirst. Appetite tolerable. Received some relief from squills and other medicines she took about ten days since; but they weakened her very much by acting violently on her bowels.

I consider this as a case arising from mere debility, concurring with extreme anxiety of mind to which her domestic concerns constantly expose her. Has been taking no medicines of late.

I prescribed a blister to the seat of the heart, the infusion of foxglove in the usual form, moderate doses of squills, opium, and calomel, h. s. with the addition of tonics as soon as the water was removed.

I saw the patient no more; but was informed that the medicines disordered her stomach and bowels at first; that by occasional variations she was in a short time restored to her usual health; and that after being indisposed in a trifling degree for a day or two she died *suddenly* in the night of the 30th of June following.

CASE XLIX.

February 8.—Mrs. A. of Nayland, Æt. 60. Has had several children. For some years disposed to

corpulency, and has lived a very sedentary life.—Palpitation or fluttering of the heart more or less constant, encreased on motion, exertion, surprise, or emotion of mind, when her breathing is at the same time impeded; but on rest breathes with freedom; can lie down in bed and on either side without inconvenience, and is not roused from sleep; pulse extremely irregular and intermitting, now and then two regular full pulsations; urine natural; bowels open, with flatulency; no thirst; appetite unimpaired; no swelling of the lower extremities, a sense of weight and constriction at the lower part of the sternum. Has been subject to palpitations and to swellings of the ankles occasionally, for some years. I consider this case in the incipient stage. No cough.

Empl. Canth. regione cordis.

℞. Infus. Dig. P. (℥j. ad ℥viij.) ℥j. Sp. Æth. Vitr. C. ℥ß. Muc. G. Arab. ℥j. Kali pp. gr. xv. M. ft. Haust. bis ind. s.

February 11.—In every respect better, though the urine has not been encreased; palpitation less, and pulse more regular. Uneasiness under the sternum gone.

℞. Scillæ P. Opii āā. gr. ß. Kali Vitr. gr. iij. Muc. G. Ar. q. s. ft. bolus sing. noct. et mat. s. cum Haust. olim. præs.

Tonic diuretic medicines were directed to be given afterwards.

August 13.—Sent for me. After having derived much benefit from the above medicines she discon-

tinued them. For some weeks has been very weak and languid; respiration quick, hurried, and anxious, together with palpitation of the heart, and sense of fluttering about the pit of the stomach, very troublesome on walking and going up stairs. Functions of the stomach, bowels, and kidneys, natural, and she continues to lie down without inconvenience. Ankles and feet œdematous, and pitting on pressure.

Having been in town some weeks ago, she consulted Dr. Reynolds, who prescribed the following medicines with evident relief while taking them.

℞. Fol. Digit. Purp. gr. ij. Confect. Ar. q. s. ft. bolus h. s. quaque nocte s.

℞. Mist. Camph. Lact. Ammon. a. ʒvj. Sp. Ammon. fætid. Sp. Ætheris Vitr. C. a. ʒ ß. Syr. Croci ʒj. M. ft. Haust. mane. et h. s. s.

I prescribed thus,

℞. Fol. Dig. P. gr. j. Nitri, Camph. a. gr. ij. Muc. G. Arab. q. s. ft. bolus mane et h. s. s.

℞. Tinct. Tolut. ʒ ß. Bals. ejusd. gr. x. cum Ovi Vitell. vel Muc. G. Ar. q. s. trit. Infus. Gent. C. ʒx. Kali pp. ℈j. Sp. Ætheris Nitrosi ʒj. M. ft. Haust. mane et meridie s.

August 23.—In a few days after using these medicines, the above symptoms were completely removed, and the urine was so much encreased in quantity as to alarm her, lest it should weaken her too much. Being desirous of again having recourse to tonics, she was directed a combination of bitters, steel, and diuretics, with much advantage, and to go

to the sea side, from which she returned in the autumn much improved in every respect.

From the above period it may be sufficient to observe that she continued to have returns occasionally, which assumed more and more the true character of the disease; and left her always weaker. At length her strength gradually declining she died of exhausted constitution in the spring of 1803.

CASE L.

February 8.—Mrs. B. of this town, Æt. 46. Naturally of a florid complexion, but her face now livid. For some years very corpulent. Constant dyspnœa of the laborious kind, as well when sitting up as when in bed, but always encreased on motion and in a recumbent posture; incessant palpitation and fluttering of the heart; urine scanty; pulse intermitting and oppressed; for twenty-four hours has expectorated much pure florid blood. When able to lie down in bed, lay with most ease on the right side, the opposite to that she has been accustomed to; had a sense of weight and suffocation when she attempted to lie on the left side; now obliged to sit up in bed; no appetite; thirsty at times; extremities and face either hot or cold. Bowels costive, though in health they were generally open. For some time before the present attack has sat up very late, and been much fatigued.

Has been subject to paroxysms of asthma and spasmodic affections of the lungs, sometimes with, at other times without cough, for several years,

always aggravated in frosty weather. Somewhat relieved for the two last days by the Foxglove, Saline Draughts in a state of effervescence, and other medicines administered by a relative, a medical practitioner of experience and respectability, at whose house she resides. A blister was applied to the chest, and the same medicines, with occasional variations were directed to be continued, for a time with considerable benefit. At length, however, every remedy ceased to produce any salutary effect; the digitalis affected her head in so peculiar and unpleasant a manner that she became strongly prejudiced against it, and earnestly intreating us not to prescribe it, her wishes were gratified, as the case appeared hopeless. She died some weeks afterwards.

CASE LI.

March 25.—Mr. Bond, Æt. 60. Tall and thin; for several years, till of late, has lived a very active life as a farmer; for some months, having been turned out of the farm, he has lived a sedentary life, and suffered much disappointment in consequence of being thrown out of business, as he thinks unjustly, to which his present illness is to be attributed. The disease is very strongly marked with some unusual symptoms. He complains of violent headach to which he has been subject for years; extreme watchfullness and restlessness; face and lower extremities swelled; difficulty in breathing does not commence till a few minutes after lying down, which obliges him to get up and sit in bed; appetite

impaired; cannot eat solids, and his stomach is very irritable.

In this case there appears to be anasarca pulmonum as well as water effused in the cavities of the chest. Prescribed the usual remedies.

May 2.—Was desired to visit him. I found that his stomach had been very much affected by the medicines, and that he vomited considerable quantities of water; that his breathing became perfectly free, that he could lie down in bed as usual, and that all the dropsical symptoms vanished, but that he did not recover strength.

For some time has neglected himself, and used no means for his relief though he has been getting worse very rapidly. Has now a violent diarrhæa and voids considerable quantities of blood, attended with very severe pains in the hypogastric region, which has succeeded a constipated state of the bowels, having been a fortnight without a motion. Spirits much depressed from the disappointment and ill treatment he has experienced.

From these symptoms he was relieved; but after this period I did not visit him more than once, and giving way to a state of despondency, he neglected the means that were recommended, and died in the course of the summer.

CASE LII.

April 14.—Mary Montague, Æt. 53. Came to me on the 9th, labouring under severe cough attended with yellow viscid expectoration, and great dysp-

nœa, threatening suffocation in a recumbent posture; palpitation and a sense of fluttering at the pit of the stomach as well as in the seat of the heart, encreased on the slightest motion, or on lying down; together with the ordinary symptoms of this disease.

Being unable to procure medicine I furnished her with a vial of the tincture of foxglove, with directions to take twenty drops twice a day and to encrease the dose gradually.

Has received considerable benefit from the tincture. Pulse 128, feeble and fluttering. Sumt. gt. xxv. bis ind.

April 29.—Every symptom very much relieved. Pergat.

August 24, 1801.—Was nearly restored to health by persevering in the use of the tincture, and occasionally a diuretic laxative, till lately, when her symptoms have returned with great violence, assuming more distinctly the characters of hydrothorax. The cough comes on in severe paroxysms. On attempting to walk, even slowly, is obliged to stop suddenly; and is frequently roused from sleep. Pain in the region of the heart, with a sensation as if something were turning or rolling. Palpitation and fluttering; can only lie on the left side; intense thirst; countenance livid. Urine in full quantity, very high coloured but without sediment. Feet neither cold nor œdematous.

Had nine children and as many abortions, the last generally attended with profluvium, to which

the disorder, as well as to the violent attacks of cough to which she was subject is to be attributed.

Prescribed an expectorant diuretic mixture, with infusion of foxglove.

August 29.—Came to me in every respect much better. Urine considerably increased in quantity. Pergat.

Continued to call on me after this period till she was restored to her ordinary state of health. There can be very little doubt that there was water in the cavities of the chest, and probably in the pericardium, though it wanted some of the characters of the disease.

CASE LIII.

April 14.—Ann Jones, Æt. 53. (The mother of the subject of case 36.) Incipient symptoms of the disease, attended with severe headach, vertigo, tinnitus aurium, imperfect vision, and acute pains in the chest, stomach, and bowels. Being unable to defray the expence of medicine or medical attendance, I gave her a vial of tincture of foxglove, with directions to take twenty-five drops twice a day.

April 22.—Headach and breathing much relieved; Sumt. Tinct. Dig. gt. 30 bis ind.

April 24.—In every respect better; very much under the influence of the digitalis; constant distressing nausea, but no vomiting; pulse 52 feeble and intermitting; urine encreased in quantity. Omit. Tinct. Digital.

August 18.—Remained free from the dropsical symptoms till within a fortnight, since which her breathing very much affected, and unable to lie down in bed, frequently roused from sleep though she sits up in bed; urine scanty, high coloured with sediment; legs and abdomen much swelled; palpitation and fluttering of the heart; pulse very quick, small and irregular; no appetite.

℞. Infus. Dig. P. (℥ij. ad ℥xiv.) ℥xiij. Kali pp. ʒij. Sp. Æth. Nitr. ʒiij. Sp. Junip. C. ʒv. M. ft. Mist. Sumt. coch. iij. ter ind.

August 21—The first few doses of the mixture produced sickness and vomiting, with relief of every symptom, and encrease of urine. Omitt. Mist. was directed mild laxatives, and to take two table spoonfuls of the mixture only, as soon as the sickness subsided, evening and morning.

August 28.—No material amendment though the urine is much encreased in quantity. Was prescribed calomel, squills, and crystalls of tartar in pills, desired to continue the mixture, and to drink freely of cream of tartar punch.

By these means all the unpleasant symptoms vanished, and she called on me several times after this to say she continued free from them. For some years have not heard of her, but believe her to be well.*

* Heard from her son she was well in January 1809.

CASE LIV.

May 14.—Mrs. Clarke, of Ashen, Æt. 56, the mother of 10 children. Has all the symptoms very distinctly marked. The most peculiar are, an incessant throbbing of the heart, carotids, and about the epigastrium so violent as to be distinctly seen through the clothes; a pulse so irregular and intermitting that no two pulsations are alike, and so quick as not to be numbered; a sense of sinking about the region of the stomach "as if her life were going from her;" at times a sensation as if a great weight were placed there; a peculiar wheesing noise in respiration, "as if her breath passed through a metal tube," to use her own words; sickness and vomiting every evening at 7 o'clock, in which a quantity of viscid pale ropy matter is thrown up, which coagulates like fat; extreme oppression after eating; frequent eructations of wind; a considerable elastic swelling not only filling the epigastrium but descending nearly to the umbilicus; swelling of the ankles and legs; urine natural in every respect.

About 14 months since had a tertian ague, of which she soon recovered; but from which she dates her present illness. Has been subject to coughs, and last winter had a severe attack which lasted some months; as well as to violent nervous complaints, much fatigue and anxiety of mind, in conducting the concerns of a large family, and from other causes.

Before the present illness was very corpulent, but now much reduced in flesh and bodily strength. From the peculiar anxiety painted in her countenance, the quick and hurried respiration, the nature of the disease was sufficiently obvious on my entering her chamber.

An infusion of digitalis with the usual diuretics, a grain of calomel night and morning, and a blister to the left side, were prescribed.

May 18.—Was very soon relieved of the urgent symptoms, but the digitalis in full quantity not producing any sensible effect on the habit I suspected the leaves were not good. Pergat.

June 13.—Continuing to receive benefit from the medicines, and thinking her complaints removed, she judged it unnecessary to take a tonic diuretic mixture ordered for her; nor were the calomel pills persevered in. A few days since began again to complain, and her symptoms are now as urgent as before.

From this period medicine was not persevered in with any degree of regularity, or so as to give the most distant chance of recovery; nor was her mouth affected by the calomel, an effect without which no permanent benefit could be derived. She died some months afterwards universally dropsical.

CASE LV.

Symptoms of *Anasarca Pulmonum* as well as of *Hydrops Pectoris.*

May 10.—Mr. Eburn, a stone mason, from Colchester, B. Æt. 44. Of stout thick make, and short

stature, is now corpulent but has been much more so. Extremely laborious, but slow breathing, encreased not immediately, but soon after, and very gradually on lying down in bed so as to prevent him from remaining for any length of time in a recumbent posture; is sometimes obliged to get up suddenly; of late has been unable to sleep without being placed nearly in a sitting posture by pillows; has a very severe convulsive dry cough; pulse 96, regular, but very hard; violent palpitation on quick motion, or sudden emotion, when the difficulty in breathing is encreased, also a sense of sinking at times at the pit of the stomach; urine scanty, high coloured, with copious pinky sediment; legs and thighs very much swelled, hard and tense, and of a livid hue; not reduced in size in the morning; feet cold; abdomen distended with water; face sallow and bloated, but not swelled; the conjunctiva of a dull yellowish cast; the liver feels hard and enlarged; appetite impaired, and he is much oppressed after eating; T. clean; very little thirst; bowels costive; great prostration of strength.

Has not been addicted to excesses in drinking; but in the constant habit of taking spirits and water; subject to great depression of spirits; and to coughs for some winters.

Mr. Newell viewing the case as extremely interesting and demanding particular attention, recommended Mr. E. for my advice, and writes me, that many years since he had a severe pain of the left side, attended with a most singularly full

and strong pulse; that blood drawn exhibited no signs of inflammation, nor produced any relief; that he conceived the disease to be organic affection, or alteration of structure of the heart or some of the parts immediately connected with it; producing anasarca pulmonum as well as general anasarca. Entertaining the same opinion of the case with Mr. Newell, I held out no hopes of success in my letter to him.

Appl. Empl. Canth. pectori.

℞. Calom. Scillæ Pulv. a. gr. j. Kali Tart. gr. iij. Confect. Aromat. q. s. ft. bolus sing. noct. et mat. s.

℞. Tinct. Benz. C. ʒij. Muc. G. Arab. ʒj. tere simul. Infus. Dig. Purp. (ʒi ad ℥viij.) ℥vij. Sp. Æth. Vitr. C. Sp. Æth. Nitr. a. ʒij. M. Sumt. coch. duo, ad tria ter ind.

I directed the use of crystalls of tartar largely diluted in the form of cold punch or negus.

August 13.—Mr. Newell informs me that in a few days after beginning the above medicines the mouth was affected by the calomel, soon succeeded by salivation; that the urine was encreased in quantity; the swellings subsided, all the distressing symptoms soon vanished; that in compliance with my wishes tonics combined with mild diuretics were administered; that his health was better than for years before; that the disorder shewing a disposition to return was again completely removed by the same means; and that he was beginning again to complain.

I heard afterwards that after a few relapses the disorder seemed to have been subdued; but that in the spring of 1803, he dropped down in a fit, while talking to another person in the street, and died immediately, having been previously in good health.

CASE LVI.

September 16.—Mrs. Robinson, of Clare, Æt. 68. A very strongly marked case, having every symptom of the disease. P. irregular and intermitting, now and then a regular pulsation. In the very advanced stage, her strength being much reduced.

Directed the Infus. Dig. (℥j ℈. to ℥viij.) with the Sp. Æth. Nitr. Sp. Æth. Vitr. C. Kali pp. and Cream of Tartar punch. Calomel was not thought necessary.

September 22.—On the night of the 17th, from voiding not more than half a pint of high coloured turbid urine, in 24 hours passed three quarts, natural in every respect, with complete relief. Since the 20th has been very much under the influence of the foxglove. P. full and only now and then an intermission. Tonics and diuretics were prescribed, with nourishing food. Appetite improved.

September 29.—Swellings entirely gone; urine more than in full quantity; gains strength slowly; pulse very full and almost regular. Wishes to lay aside medicine.

October 6.—Recovers her strength, but has discontinued medicine.

She lived a considerable time after this although the means of relief were entirely neglected.

The subject of the following case was the wife of a medical man of respectability, in this country, and is marked by many peculiarities worthy of being recorded. It was not only regarded by the husband, who might naturally be supposed to have attentively watched the progressive changes of every symptom, but by two other physicians, as well as myself, as a distinctly marked case of general dropsy, having at the same time most of the symptoms of Hydrops Pectoris. Willing perhaps to imagine that I saw farther into the nature of the case than my brethren of the profession, I delivered it as my opinion that the disease was probably combined with *Angina Pectoris*. The termination, however, was such as induced many to suspect that the case had been mistaken, and that the patient had not laboured at any time under dropsy. The symptoms are faithfully detailed, having been committed to paper by the patients side, and afterwards submitted to the husbands inspection; the reader must therefore form his own conclusion.

CASE LVII.

October 17.—Mrs. H——, of ———, Æt. 42, of short stature and disposed to corpulency. Has had five children and as many abortions. Breathing quick, hurried, and anxious, especially on sudden

motion or surprise; has a peculiar sense of sinking, fainting, or fluttering about the heart, "as if her life were going from her," amounting sometimes to palpitation; is obliged to lie down in bed with her chest much elevated by pillows; can lie on either side but not on the back; her sleeps are short and disturbed, and she is sometimes suddenly roused by a sense of suffocation; P. from 68 to 72, extremely small, and irregular, but without any complete intermissions; a pain in the epigastrium "as if a stake were passing through her," sometimes as if a chord were drawn tight round her; face and nose very cold and pallid; frequent drowsiness, but the only comfortable sleep she enjoys is in her chair after dinner; whole body chilly, and the extremities cold, of a livid hue, with a sense of numbness; urine scanty, high coloured, with dropsical sediment; abdomen preternaturally enlarged; a sensible induration in the right side of the hypogastrium attended with constant uneasiness, encreased on pressure; appetite impaired; T. dry and clammy; B. costive; a slight œdema of the legs lately, but none now.

Was first taken ill two months since, with oppression and difficulty in breathing, and cough, which she attributed to cold. After dinner, while I was with her, had a fainting fit which lasted about ten minutes; it was preceeded by a violent pain in the epigastrium; the pulse could scarcely be felt. Catamenia appeared last on the 19th Sept.

Has taken various medicines, such as digitalis,

calomel, æther, bark, steel, &c. under the direction of her husband and two respectable physicians. Was let blood lately, which was extremely thin and pale.

I directed digitalis and calomel, combined with bitters and diuretics, and a stimulant plaster to the epigastrium.

The disposition to fainting; the peculiar sense of sinking about the heart; the extreme feebleness of the pulse, led me to suspect that there was water in the pericardium, probably combined with *Angina Pectoris;* and the unequality in the left side, that one ovarium was diseased. She persevered in the above medicines, and rubbed in mercurial ointment for some time with various success; sometimes with apparent relief, at other times without any. Her body gradually encreasing in size, her knowing female friends began to suspect "she was in the family way," of which neither her husband nor herself entertained the most distant suspicions; at length, however, she was seized with severe pains, which, under different circumstances she would have imagined to be *labour pains*, and to her great surprise was delivered of a full grown healthy child, about eight months from my first visit, after which all her complaints vanished. I had not seen her for some months prior to her delivery.

Having adopted it as a maxim to detail unsuccessful as well as successful cases, and any errors or omissions I may have committed, when they were likely to lead to any useful inference, I trust I may be excused for having inserted the above

case. Many of the symptoms indicating the presence of water in the pericardium and other cavities of the chest were present; but whether or not any fluid was really effused, or whether all these are to be referred to a sympathetic affection, the candid and intelligent reader must determine.

At the time of copying this, August 1807, the lady is in perfect health.

CASE LVIII.

Hydrops Pericardii.

November 28.—Mrs. Vaisey, of Maplestead, Essex, Æt. 33, married; has had five children and one miscarriage; of a thin slender make; naturally of a constitution extremely delicate, from early infancy, and often ailing. Has been let blood frequently, about a week ago by her own desire. From her feelings and from her sister having died of a similar complaint, thinks she has water in the chest.

Breathing at all times quick, hurried, and difficult; but more especially on walking quicker than usual, on going up stairs, or on attempting to lie down in bed; at times not till she has been in bed some time; is often suddenly roused from sleep, and is immediately obliged to go to a window where she remains sometime struggling and gasping for breath, attended with a most distressing sense of oppression and anxiety about the precordia; in these paroxysms she makes frequent laborious efforts with the mouth open and the alæ nasi expanded,

throwing the arms at the same time over the head "before she recovers her breath;" sometimes a sense of choaking as if a chord were tied round her throat; at others as if an immense weight or load were placed on the heart; and not unfrequently a sense of sinking and fluttering; palpitation of the heart; pulse 100, very small, varying much, and from the slightest causes; appetite pretty good, but she eats very little from a most distressing oppression produced by the smallest quantity of food; some degree of swelling about the epigastrium at times; urine very scanty, high coloured, with a pink coloured sediment; has frequently voided large quantities of pale urine, which weakened her much; since her present illness has done the same with relief. Bowels costive of late, but formerly lax; great stupor and drowsiness at times, but a peculiar restlessness which prevents her from sleeping. No œdematous swellings of any part; but her feet and legs up to the knees, as well as her hands, are unusually cold; at times complains of an *aching* pain and sense of numbness about the shoulders extending down the arms.

In this case all the symptoms of the disease are very strongly marked, and there appears every reason to suspect the serous effusion is principally confined to the pericardium; but there is room to hope that debility is the principal cause.

Appl. Empl. Canth. pectori.

℞. Fol. Dig. nostr. incis. Cort. Aur. contus. āā. ʒj ß. Infunde in Aq. ferv. ℥x. per hor. iv. dein cola;

℞. Infus. Colat. ʒx. Sp. Æth. Vitr. C. Sp. Æth. Nitr. aa. gt. 50. Kali pp. gr. xv. M. ft. Haust. cum Pilul. infra præs. No. ij. mane et hor. v. P. M. s.

℞. Ferri Vitr. Myrrhæ aa. ʒ ß. Kali pp. gr. xv. tere simul et Conf. Ar. q. s. ft. Pil. xx.

I directed the digitalis to be watched with close attention, as soon as it produced the slightest effect on the habit to be discontinued, and the Infus. Gent. C. to be substituted, with the pills.

The usual restrictions in diet, drink, and exercise were more particularly enjoined in this case, as the extreme weakness and natural delicacy of constitution required every attention.

With the view of recruiting the almost exhausted strength, tonics were at once combined with the digitalis, and the impoverished state of the blood seemed peculiarly favorable for the exhibition of steel: by their aid I had no doubt but the salutary operation of the digitalis and other diuretics would be promoted.

Calomel was not prescribed for the same reasons, and on the presumption that there was no organic affection.

March 19, 1801.—Saw her no more till this day.

She gave me the following account of herself.—That she was restored to her ordinary state of health by the medicines prescribed, "a peculiar sense of sinking and fluttering at the pit of the stomach, and a troublesome pain of the left side excepted."

That about a month since she was seized with

acute pain of the left side of the head and face, attended with irregular rigors, succeeded by fever, extreme debility, and the sense of sinking &c. about the pit of the stomach in a greater degree than before. She has now this symptom in a most distressing degree, together with frequent returns of palpitation, so violent that her life is dispaired of while it lasts. P. very feeble, quick, and somewhat unequal, but without intermissions. Can lie down in bed, but only on the back, inclining to the left side. When she attempts to lie on the right, the pain of the left side is much increased, with "a sense of dragging." A swelling in the left iliac region which appears to be the kidney, very painful on pressure; subject for years to nephritic complaints. Urine scanty, high coloured with sediment. No appetite; B. costive.

Trusted the cure here to mild tonics, diuretics, and very small quantities of calomel.

March 21.—Soon after my last visit was seized with sickness and vomiting which have continued ever since with very little intermission, and reduced her to the lowest state of weakness.

Anodyne Glysters, liniments, and medicines calculated to allay the irritation of the stomach, and afterwards mild tonics, with diuretics, were prescribed, with such success that she was in the course of a few weeks restored to her ordinary state of health.

In May, 1807, I attended her husband, when she was in better health than usual; nor had she any return of the dropsical affection, though she had a

severe attack of cough in the spring, which continued for some weeks.*

CASE LIX.

December 29, 1800.—Mr. Coldham, of Cavendish, Æt. 58. Though a publican, yet temperate in his habits; of a florid complexion, very corpulent, but strong and muscular. Has been in the habit of using great bodily exertion in moving his beer casks when full. Complains of what he calls the *vapours*, which seem to be fits of yawning, together with a peculiar sense of fluttering and sinking at the pit of the stomach. P. intermits occasionally. B. and other functions natural.

Though I did not as yet consider him as labouring under Hydrothorax, I confidently predicted its approaches; and the mode of treatment which was directed for him was intended to prevent it. After this period he consulted me several times; and invariably derived benefit from the means recommended, insomuch that he had been free from complaint for several months together. Finding, however, that the disorder in spite of all his precautions assumed more and more the character of dropsy of the chest, I urged the necessity of giving up his business. This he complied with; at length, however, the fluttering became more constant, with occasional palpitation; his breathing difficult, together with inability of bearing the recumbent posture; scanty high coloured urine; œdematous

* I have reason to believe she is well at this time, March 1809.

feet and ankles, and every confirmed symptom of the disease. From these attacks he was repeatedly relieved by the usual remedies; but in January, 1806, being seized with an inflammation of the lungs, attended with fever and cough, the dropsical symptoms returned, and he died the latter end of March.

This case shows that the most vigorous constitution, even with temperance, if attended with corpulency, and exposed to causes which produce sudden interruptions to respiration and pulmonary circulation, is not exempt from Hydrothorax. I foretold the disease in this instance when the patient first consulted me in 1800, some years before effusion commenced.

The subject of the following case owed his disease to similar causes, concurring with the relaxing effects of a sedentary life.

CASE LX.

January, 1801.—The Rev. Mr. P. of ———, about 45. Naturally of a strong robust constitution, tall, but very corpulent. Having a seminary for the education of young men, has lived a studious and sedentary life for some years; and in order to obviate the disposition to corpulency, and other inconvenience, thence occasioned, has been in the habit of digging in his garden, and using other vio-

lent exercise, generally till he was in a profuse perspiration. He began at length to find not only such exercise, but even that of quick walking irksome, and to complain of a sense of fluttering about the heart and epigastrium, succeeded or attended at times with palpitation; inability to lie down in bed, and ultimately of symptoms of water in the chest, finally succeeded by universal dropsy, under which he lived upwards of two years, deriving occasional relief from medicine. I was not his physician, but saw him occasionally as a friend. I suspected from his appearance that the heart was loaded with fat; and the circulation being interrupted through the lungs in health, the sudden transition from a quiescent state to that of violent muscular exertion, with the body bent downwards in digging, might readily be supposed to produce the disease in a habit still farther predisposed by the laxity of fibre occasioned by confinement.

The foxglove, squills, and mercury relieved and repeatedly unloaded him of the water; and a salivation* at one time excited under the direction of

* It has been mentioned in the history, p. 195, that salivation has sometimes cured this disease. When attending a gentleman in October last, at Fordham, a young man, a blacksmith, came to consult me, labouring under universal dropsy of the most unpromising kind. I prescribed digitalis, squills, and calomel, in combination with other remedies. In the course of a few days, from neglecting my injunctions, he was in a most profuse salivation, attended with alarming symptoms, from which he was rescued with difficulty. The dropsy, however, was completely cured, and he said he was in good health when I saw him in March, 1809.

Dr. Clarke, of Newcastle, he vainly flattered himself had effected a complete cure.

CASE LXI.

January 22.—Mr. H. surgeon of C——h, Æt. about 65. Naturally of a florid complexion, and corpulent. Has lived well and committed occasional excesses in strong beer and wine. For some years has complained, occasionally, of difficulty in breathing, especially in winter, attended frequently with cough, and copious yellowish expectoration. For more than twelve months these attacks have been frequent and violent, so as to prevent him from following his professional vocations, and from lying down in bed, attended generally with diminished secretion of urine, and œdematous ankles. The lac ammoniacum and squills taken freely were his constant remedies; but ceasing now to afford him any relief, he requested me to prescribe for him. The urine was very small in quantity, the legs much swelled, and the breathing so difficult that he had not ventured to seek repose in bed for several nights. Having repeatedly seen the good effects of my mode of treating dropsy in others, he readily agreed to try it in his own case. It succeeded to our mutual wishes; but no sooner was the water evacuated, and all his sufferings at an end, than he discontinued medicine; nor were the earnest intreaties of his relatives or myself of any avail in persuading him to persevere in any plan of medicine or regimen likely to effect a permanent cure. The only remedy he

would consent to use for several months, was pills of digitalis and calomel, which he generally took for three or four nights successively, till the water was evacuated, and the urgent symptoms relieved, which, for a considerable time they never failed doing. But having refused every medicine for several weeks his symptoms have increased to a most distressing degree; and having been of late entirely confined to his chair by night as well as by day, the legs have swelled to so great a degree as to burst the cuticle, from which considerable quantities of water have been constantly discharging. Has almost constant drowsiness, without any refreshing sleep; is frequently roused suddenly, attempts to get up, and talks for some hours incoherently, in such a manner as to betray symptoms of mental derangement. Though confined to his chair and unable to walk for some time, yet he got up in the night in one of these paroxysms, when the family was asleep, walked up stairs in great agitation, alarmed them, not only by his unexpected presence, but by vociferating that some thieves had broke into the house and were going to murder him.

At length the legs becoming extremely inflamed, and ulcerated; the discharge so offensive and troublesome, he once more yielded to my entreaties of taking medicine: the following was prescribed,

℞. Calom. Dig. Purp. P. a. gr. j. Cryst. tart. P. gr. iv. Conf. Ar. q. s. ft. bolus sing. noct. et mat. cum haust. infra præs. s.

℞. Infus. Gent. C. ʒx. Tinct. Benz. C. gt. 60.

cum Muc. G. Arab. prius trit. Sp. Æth. Nitr. ʒj. Kali pp. gr. x. M.

February 2.—Saw him. In the course of a week the swelling of the legs and discharge of water had entirely subsided, the ulcerations were nearly healed, the urine having encreased to a profuse degree; the breathing became easy; his mind was composed, and he had been able to lie down in bed, and to enjoy refreshing sleep for several nights. About the 29th ult. being carried out in the air, he was in consequence seized soon after with inflammation and swelling of the throat, attended with difficult deglutition and a copious discharge of saliva and viscid phlegm from his mouth and throat, since which his mind has been again repeatedly agitated by maniacal ravings, so as to require coercive means at times to keep him within bounds.

I found him perfectly calm, but during my visit he betrayed at times evident symptoms of mental derangement. The dropsical symptoms having been removed, the secretions going on well, and refusing to conform to any restrictions no medicine was prescribed, and he died soon after.

From the sudden and complete relief so repeatedly experienced in this case from medicine, it is but reasonable to infer that much more permanent advantage would have been obtained, had the patient conformed regularly to the plan enjoined.

CASE LXII.

January 12.—Miss Dickson, of Bumstead, Essex, Æt. 33. Hydrothorax, Ascites, and Anasarca, attended with an acute pain and swelling of the liver, which prevents her from lying on the right side, and from which the dropsy appears to arise.

Has been ill some months, and taken squills, digitalis, calomel and saline diuretics, without advantage. Strength and appetite much impaired.

Prescribed similar remedies, but in different combinations, together with crystalls of tartar largely diluted.

January 18.—In a few days the urine began to increase in quantity, the swellings to abate, the appetite and strength to improve, and she is now mending rapidly. Directed the same plan, with tonics, to be persevered in for some time after every symptom disappeared, and the calomel to be continued till the mouth was affected.

March 22.—Was desired to see her. I was informed that after my last visit she continued to mend; that the swellings had entirely subsided, but that some degree of tumefaction and uneasiness remained in the right side; that in a fortnight, contrary to my injunctions, thinking herself perfectly well, she discontinued the medicines; and that in a few weeks all her complaints returned and continued to increase since.

The abdomen is now much larger than it was at

my first visit in January; the legs are more swelled; the difficulty in breathing greater; and she is unable to lie only on her back with the shoulders much elevated. Voids very little urine; hands and feet cold and livid with a sense of numbness. Liver sensibly enlarged. Prescribed similar remedies as before.

March 30.—The disorder has gained ground; the abdomen more swelled and tense. No sensible effect either from the digitalis or calomel.

Directed the digitalis in infusion in combination with aromatics, tonics, diuretics, and calomel, in the usual form.

April 4.—The Surgeon reports that no amendment had taken place, that the abdominal and other swellings are larger, that the family begin to be impatient because the lady did not experience the same speedy relief which she received before, and now begin to listen to the importunities of some kind neighbours to consult Professor Harwood, of Cambridge. At my former visit I suggested the propriety of letting off the water by tapping if the disorder should not soon be checked, but was desirous of charging the habit with mercury first, in order to make an impression on the disease of the liver, while it was exciting at the same time the languid absorbents to a more vigorous action, without which no important advantage could be hoped for. I now urged the operation, after which I hesitated not to hold out strong hopes of success, provided a reasonable time were allowed me to pur-

sue the principle I had laid down. Confident that this was the most rational mode of proceeding, and perhaps the only one likely to ensure success, and knowing at the same time that the most unworthy arts were used to supplant me in the family, I expressed a perfect readiness to resign the patient to any other physician who might be proposed. Professor Harwood was accordingly sent for on the 9th. I was afterwards informed that he disapproved of the digitalis in pointed terms as a deletereous drug, accompanied with observations which I am willing to hope, for the credit of the celebrated University of which he is a member, were not correctly stated to me. He prescribed as follows,

℞. Cremor. tart. ʒ ß. Conserv. Cynosbat. q. s, ft. bolus hor. 10. Mat. et 4ta. P. M. s.

℞. Opii Colat. gr. j. Sperm. Cet. ʒj. Solve in Vit. Ov. Sp. Cinnam. ʒj. Aq. pur. ℥jß. Syr. Bals. ʒ ß. M. ft. haust. O. N. s.

The patient had no cough; and it is but justice to remark that before his visit I understood the medicines began to act on the kidneys.

At his next visit, a few days afterwards, the Professor prescribed gamboge in full doses; but the lady getting rapidly worse, Dr. Kirkland, of Chelmsford, was next consulted. He approved of the plan I had been pursuing, and after a few visits, finding the medicines prescribed of no avail, proposed tapping. The water was drawn off several times afterwards, but nothing having been done towards a permanent cure, she died in the course of the summer.

Had the calomel, aided by the other medicines, been persevered in at first, as particularly enjoined, or even after my second attendance, till the mouth was affected, or till slight salivation was produced, it is highly probable the event would have been very different, as happened in cases 5 and 6, and in some of those which follow. But the practitioner has too often to deplore that his best endeavours are frustrated by such causes.

CASE LXIII.

March 23.—Mr. Mills, of Preston, a publican, Æt. 53. Has indulged freely in the use of intoxicating liquors, more especially in strong beer. Has been subject to attacks of gout; but in other respects till lately enjoyed good health.

Together with most of the symptoms of the disease in a painful and distressing degree, I find by my report book, that he has pains, alternating with a sense of numbness, of the shoulders, extending down the arms, sometimes all over the chest, and under the sternum; frequent cramps or spasmodic contractions, and great coldness of the lower extremities; that he often talks incoherently when suddenly roused from sleep; that the urine is without sediment, sometimes pale, and encreased in quantity; that the sense of sinking at the stomach is so distressing as to prompt him to the frequent use of warm cordials. Has no appetite, and his strength is very much impaired. The difficulty in breathing has been coming

on for several weeks, within a month more particularly, since he had a severe cough, to which he attributes the sudden increase of all the symptoms.

℞. Calom. gr. iv. Cryst. tart. P. ʒ ß. Myrræ ʒj. Digit. et Scillæ Pulv. sing. gr. viij. tere simul et Conserv. cynosb. q. s. ft. Pil. xxxvj. Sumt. tres ter ind. cum Mist. infra præs. coch. No. iij.

℞. Tinct. Benz. C. Muc. G. Arab. a. ʒiij. tere simul. Infus. Gent. C. ℥vij. Sp. Æth. Nitr. ʒij. Kali pp. ʒj. M.

Appl. Empl. Canth. pectori.

From the sallowness of the countenance, and yellow hue of the conjunctiva, though I suspected derangement of the biliary secretion, yet I apprehended no serious disease of the liver. The extreme debility, especially of the vital organs, induced me to blend tonics in the first instance with the diuretics.

April 4.—The contrast between his appearance to day and at his former visit was such that I did not at first recollect him. His countenance looks florid and healthy, with a pleasing smile upon it, instead of that distressing anxiety which marked it before. Breathing free; cough relieved; urine natural; is not roused at night, and enjoys refreshing sleep; appetite and strength much improveded. Perceived no amendment till the 29th ult. Pergat. U. A.

From the above period he continued to mend, was restored to perfect health in a few weeks, and

being more circumspect in his mode of living has had no return of the dropsy since.*

CASE LXIV.

March 26.—Mr. Wing, of Colne, Æt. 63. Fat and corpulent with a lax fibre. Has the disease strongly marked, with tension and hardness of the abdomen. Has been able to bear the recumbent posture till last night, when he was suddenly roused from sleep and threatened with suffocation, in consequence of which the family were so much alarmed that I was sent for. Has a dry cough, with great prostration of strength.

Empl. Canth. pectori.

℞. Cryst. tart. P. ℈j. Calomel. Scillæ, Dig. P. a. gr. j. Syr. Zing. q. s. ft. bolus sing. noct. et mat. per dies tres vel iv. s.

℞. Bals. tolut. gr. x. T. Benz. C. gt. 80. tere cum Muc. G. Arab. ʒj. Aq. Menth. P. ʒx. Sp. Æth. Nitr. ʒj. Kali pp. gr. xv. M. f. haust ter ind. s.

April 6.—Every symptom is much relieved; but the boluses having acted on his bowels, and been continued longer than was directed he is weak and low.

Prescribed a tonic diuretic mixture, with Steel, Myrrh, Bals. tolut. and Kali pp. in pills.

May 7.—Called upon me to say he has recovered

* Was in good health in March 1809, at which time I was informed by his surgeon he had prescribed occasionally for him under dyspeptic complaints, to which from his mode of living he was subject.

his ordinary state of health. On examining his pulse it was full, somewhat unequal, with now and then an intermission.

December 12, 1802.—My immediate attendance was desired: I found him labouring under strangulated scrotal hernia since the 7th. Having had a hernia for forty years the protruded parts were very considerable, and the scrotum was now very large, containing apparently intestine, but neither tense, hard, nor painful. He had incessant sickness and vomiting, with great hardness and distention of the abdomen, a quick pulse, and a train of unpleasant syptoms. The ordinary attempts at reduction had been used in vain, by his surgeon, and he was in a tub of warm water on my arrival. I directed a pail of iced water to be procured, and after applying wet clothes to the part for some time, succeeded very readily in reducing the intestine.—But though repeated glysters and other means had been used no evacuation followed, and he died on the 14th.

He had had two or three slight attacks of the dropsical affection, which were always removed by the means originally prescribed, without my farther attendance.

CASE LXV.

May 20.—Mr. S. surgeon, Wickambrook, Æt. 71. Prior to the present illness was of a full corpulent habit; and for many years partial to good strong ale, in which as well as in other intoxicating liquors he frequently indulged to excess. Has been

subject for some years, especially in winter, to cough, attended with copious yellow expectoration, difficulty in breathing, and palpitation on quick motion. In the winter 1793, had a very severe attack in which I attended him; and last winter one still more violent, of longer duration. About 20 years since owing to a fall from his horse he broke two of his ribs, and was otherwise much bruised, for which he bled himself to the enormous quantity of near 40 oz. by measure. From this period has been occasionally subject to palpitation of the heart, and dyspnœa, which obliged him frequently to stop for some minutes when walking to recover his breath. Since the last attack of cough, the dyspnœa, and palpitation have increased to such a degree as not only to prevent him from walking, but, for a fortnight, to oblige him to sit up in bed. He is threatened with immediate suffocation when he attempts the recumbent posture; has constant drowsiness; but though he seeks repose principally in a chair, his sleeps are short and hurried, being constantly roused by a most distressing sense of oppression about the præcordia, for some time after which the breathing continues extremely difficult; and the muscles of respiration are agitated by convulsive spasms. Has the usual sense of fluttering about the heart and epigastrium. P. exhibits a rapid succession of irregular feeble vibrations, with now and then a complete intermission. Urine very much diminished in quantity, at first with, now without sediment. Abdomen of late somewhat swel-

led; feet and ankles œdematous and cold. No appetite. T. furred, with thirst. B. regular. Strength much reduced. Complexion which before was florid, is now livid. Has almost constant yawning.

He suspects from his peculiar sensations water in the pericardium, which seems very probable both from the present symptoms, as well as from the causes and preceding history. Has taken but few medicines. I prescribed the following,

℞. Infus. Dig. P. (℥jß. ad ℥viij.) ℥j. Tinct. Benz. C. ℥j. cum ov. Vit. q. s. trit. Sp. Æth. Vitr. C. ℥j. Kali pp. ℈j. M. ft. Haust. ter ind s.

Appl. Empl. Canth. pectori.

Directed cream of tartar punch to be drank freely.

May 25.—Has derived very great relief from the medicines, and last night had several hours natural refreshing sleep, without being once roused, nearly in the recumbent posture, which he had not experienced before for several weeks. The urine has become natural in appearance, but is not much increased in quantity. Pulse beats a few regular strong pulsations. Thinks himself slightly under the influence of the foxglove. Omitted the foxglove, and prescribed tonic expectorant diuretic medicines.

June 2.—Since my last visit the amendment has been unusually rapid; the urine having been increased to six times the former quantity, the cough and expectoration, the swellings of the abdomen and legs, and indeed every other distressing symptom, being nearly gone. He can now walk about the room without assistance, breathes and talks with freedom,

whereas he could only express himself before in short hurried abrupt sentences, having been constantly interrupted either by yawning, cough, or spasmodic laborious breathing. His countenance too has lost its livid hue. With the view of removing any organic affection which might be connected as a cause with the serous effusion, and of keeping up a vigorous absorption, as well as of restoring lost tone, I prescribed as follows,

℞. Calom. gr. v. Dig. Purp. Scillæ P. a. gr. x. Crystall. tart. P. ʒ ß. Myrrhæ ϑ ij. tere simul et Syr. Zing. q. s. ft. Pil. xx. Sumt. duas sing. noct. et mat. cum haust. infra præs.

℞. Infus. Gent. C. ʒ x. Sp. Æth. Vitr. C. ʒ j. Kali pp. gr. xv. M. ft. Haust. mane, meridie et vesperi s.

From this period it may be sufficient to remark that he invariably derived benefit from, and was repeatedly unloaded of the water by these medicines, but could not be persuaded to persevere in them for any length of time, till the calomel produced its full effects on the habit. At length he ceased to use any means, and died on the 5th of January 1802, his whole body being enormously distended with water.

CASE LXVI.

June 18.—Master Johnson, of Earls Colne, Essex, Æt. 15. Is much distorted about the chest, spine, and lumbar region. Had an enlargement and distortion of one of the lumbar vertebræ at two years

of age, succeeded by lumbar abscess, which discharged for some years. Has never enjoyed good health; and for more than a year has laboured under universal dropsy, deriving occasional relief from medicine, chiefly drastic purgatives. For some weeks, however, these aided by digitalis, calomel, and squills, have failed. The whole body is now very much swelled; but more especially the legs, thighs, scrotum and penis, (the latter being tortuous in a great degree), insomuch that he is unable to walk or even move from a couch on which he is placed in the morning. The face and neck are much swelled in the morning, but the swelling subsides towards evening. Breathing not so much affected as might be expected. Urine small in quantity, but not high coloured, and without sediment. B. very loose. P. regular. Appetite unimpaired. T. dry, with thirst. Anasarcous swellings soft; skin pale, thin, and transparent.

He was directed full doses of digitalis, calomel, and squills, combined with saline diuretics, aromatics and bitters. In a few days the heart was under the full influence of the former, the pulse being much slower, with frequent intermissions; but no other organ was affected by it. The amendment, however, was much slower than I had generally experienced, several days having elapsed before the swellings subsided.

August 8.—By persevering in the plan laid down, the swellings of the scrotum and penis gradually disappeared; that of the legs was nearly subdued;

his strength was so far recovered as to be able to ride out daily, the distance of ten miles this day to my house, which he bore without any inconvenience.

In this case, however, as in every instance of dropsy which has fallen under my care accompanied with distortion of the body, the advantage derived from medicine was of short duration, as must naturally be expected under the circumstances producing the disease. The combination did all that could be hoped for by repeatedly evacuating the water.

CASE LXVII.

July 27.—Mr. Stewart, of Halstead, Æt. 59. Had lived freely.—Though extremely weak and emaciated, in the last stage of the disease, expectorating large coagula of florid blood, voiding scarcely any water, his legs much swelled, cold and livid, unable to lie down, and threatened with suffocation for several weeks; and though he took the medicines prescribed very irregularly, yet the dropsical symptoms were for a time entirely removed, with proportional relief.

I saw him no more, but heard from his surgeon that he died of exhausted constitution about a month afterwards.

CASE LXVIII.

September 16.—Mr. B. Smith, of Colne, a carpenter, Æt. 51. Had been in the East Indies, where he suffered severe attacks of the liver complaint. Together with the ordinary symptoms, he has been

for several nights constantly roused suddenly not only from sleep, but even on attempting to lie down in bed, by a sense of suffocation together with palpitation, which obliges him to run to a window, where he remains for some time *struggling for breath* before he is relieved. A profuse sweat breaks out about his face and neck. Face livid; no swellings of the legs. P. occasionally intermitting; a cough, with viscid expectoration. On account of these complaints, which have been coming on for three years, of late increasing rapidly, has been obliged to leave London. The usual remedies, and a blister to the chest.

September 24.—Can lie down in bed, walk, and breathe with perfect freedom in all postures. Cough still troublesome. Has been very much affected by the foxglove, especially with vomiting and purging.

June 2d, 1804.—Heard no more of him since last report till this day when he came to consult me for the same complaint, of which he had been cured by following the plan recommended, and from which he remained free till lately. Is not so ill as he was before. Eyes yellow. P. regular. Veins of his hands black and very much distended. Similar means were equally successful in removing the disorder, for how long a period I have not since ascertained.

CASE LXIX.

April 24, 1802.—Mr. Kemp, a farmer, of the parish of Hawkedon, Æt. about 51. Of a very full habit and florid healthy complexion, before the

present illness, but thick and short, and though very fat yet not of lax fibre. Indulged freely though not to intoxication in good ale. Has been subject for several months to headach, giddiness, and drowsiness, with constipated bowels, owing evidently to plethora, with particular determination to the head, for which he occasionally consulted me. Of late he has complained of great languor, difficulty in breathing, with cough and scanty expectoration; and he is sometimes roused suddenly from sleep; pulse full and laboured but regular. Urine not much diminished, at times only with sediment. B. costive; some thirst. No œdematous swellings as yet.

I considered the case as incipient hydrothorax and treated it accordingly.

May 8.—Came to me much better. Directed a continuance in the medicines, till his mouth should be slightly affected with the calomel.

August 21.—My immediate attendance was desired. I found him labouring under the disease in its genuine confirmed form, with some of its worst symptoms. He was extremely weak, languid, and much reduced in flesh, with soft flabby fibre; his countenance of a livid hue and expressive of great anxiety; though unable to walk or lie down his breathing was at all times extremely quick and difficult, with a sense of sinking, fluttering, or palpitation; no natural sleep, being constantly roused suddenly when he attempted to sleep. P. quick and hard; B. regular; urine natural in quantity; legs

swelled; had a pain and tightness across the chest extending under the arms; much oppressed after eating; very little cough.

On inquiry he acknowledged that he had not persevered in the medicines or adhered to the other restrictions as enjoined. Thinking his complaints removed he discontinued them, and could not refrain from indulging in his own home brewed. Of these distressing symptoms he was again relieved for some time.

Did not see him till,

November 23.—I found him now in the last stage of the disease, accompanied with universal anasarca, his whole body, thighs, and legs being very much swelled. He died soon after, not having given himself a chance of recovery from the first, by conforming with any degree of regularity in the plan laid down for him.

This case affords another example of the consequences of inordinate corpulency, and a full plethoric habit, in a constitution previously strong and vigorous, when produced by a particular mode of living, and when no means are used to counteract them.

When this man first consulted me, some years before the dropsy commenced, for complaints evidently arising from plethora, he might have enjoyed many years of good health, and probably escaped dropsy entirely, had he laid aside malt liquors, abridged himself in the quantity of animal food, and

used more exercise, as directed. It seemed at one time an equal chance whether he was attacked with apoplexy or dropsy.

CASE LXX.

May 22.—Mrs. Beedle, of Melford, Æt. about 65. Of short stature. Has every symptom of the disease very strongly marked, so as to have been unable to lie down for some time. Urine very small in quantity; legs œdematous; a troublesome cough, with yellow viscid expectoration.

Appl. Empl. Canth. pectori.

℞. Infus. Dig. P. (℥j. ad ℥viij.) ℥v. Tinct. tolut. ℥ij. cum ov. Vit. q. s. trit. Mell. Scillæ ℥ß. Sp. Æth. Vitr. C. ℥ij. M. Sumt. coch. tria ter ind.

℞. Calom. Scillæ a. gr. ß. Cryst. tart. gr. iv. Cons. cynosb. q. s. ft. bolus sing. noct. h. s. s.

Was permanently cured by persevering in the above remedies, succeeded by tonics as long as they were thought necessary.* The success of the plan in the above case exceeded my most sanguine expectations, the patient having been so far advanced in years, and the strength so much exhausted.

CASE LXXI.

June 7.—Mr. White, of Colne, a blacksmith, Æt. 51. Very stout and corpulent. Has indulged freely in beer. Together with the ordinary symptoms of the disease in a most distressing degree, has pains of the neck and shoulders, and the difficulty

* Was in good health in March, 1809.

of breathing is increased on first going to bed, and on getting up in the morning. Was prescribed calomel, squills, and crystalls of tartar largely diluted, beside a diuretic mixture of foxglove &c.

On the 26th, came to me to say he was immediately relieved, and thought himself nearly cured till within a few days when the symptoms began to return. Saw him no more.

CASE LXXII.

March 20.—Mr. Parsons of Dudley, Worcestershire, Æt. about 30. Extremely fat of his age; with a soft flabby fibre, but of a healthy florid complexion prior to the present illness. Has lived very intemperately at times for some years, and having occasion to travel for several weeks twice a year, to collect orders for an extensive mercantile house, of which he and an elder brother are the principals, he drinks wine freely at all times, especially at night, with his employers, and indulges in hot suppers. Had a severe rheumatic fever last year in Sudbury, attended with considerable swellings of the joints, but which was removed without being relaxed or weakened by bleeding, or other evacuations, chiefly by the antiphlogistic treatment, of which moderate doses of Calomel and James's powders formed a principal part. Has the symptoms of the disease very strongly marked; the urine is not always diminished in quantity nor high coloured, nor are the feet or legs swelled; but the breathing has been for a considerable time more or less affected; now so much

so as to prevent him from walking or lying down without great inconvenience; is frequently roused from sleep by a sense of suffocation attended with palpitation. The pulse is full with occasional intermissions. Countenance now sallow and bloated. Has a troublesome cough. Has not conformed to the regimen recommended after his late illness. The disorder has been coming on gradually for several months.

I am disposed to attribute the symptoms as yet as much to interruption of blood through the lungs from extreme corpulency, concurring perhaps with some organic defect about the heart itself, as to serous effusion. Being determined to proceed on his journey in a day or two, I earnestly urged the necessity of a complete change in his mode of living, and advised him to go his rounds on horseback, instead of indulging in an open carriage as he had hitherto done.

I put him upon a plan of medicine and regimen calculated to keep up a vigorous absorption, to remove organic affection, to reduce redundant fat, and ultimately to give strength and tone to the whole frame. I furnished him at the same time with copies of my prescriptions, requesting him to shew them to any practitioners he might have occasion to consult, and to correspond with me as he found necessary.

September 29.—Came to Sudbury on his round, and consulted me. By taking the medicines prescribed in March last, though very irregularly, the disorder had been kept in check for some time. Has

been of late getting worse. No external swellings as yet, nor is the urine regularly diminished in quantity. Is frequently roused from sleep; the breathing is at all times more or less difficult; and profuse sweats frequently break out on the upper parts of the body. After this period I do not find by my reports that he returned to Sudbury. I however frequently corresponded with himself, and about twice with the medical practitioner who attended him at Dudley. His brother a very intelligent man, called in March, 1803, for my advice on his own case, observing at the same time that I was the only one of the many practitioners whom his brother had consulted who pronounced correctly on the nature of his case, as the appearances after death, which he obligingly favored me with would shew.

DISSECTION.

" A large portion of the cavity of the thorax was occupied by the heart and its pericardium, the latter containing from half a pint to ten ounces of water tinged with blood.

The heart was enlarged to a monstrous size. The length from the apex to the extreme point of the right auricle nine inches.

The circumference at the basis eighteen inches.

The left auricle and ventricle of the natural size. But that portion of the heart forming the posterior side of the left ventricle was one inch and a half thick.

The right auricle and ventricle were much en-

larged, the former thinner than natural, and distended with fluid black blood, about a pint by computation.

The sides of the right ventricle were as thin as writing paper, very tender and easily torn; it contained a small quantity of coagulated blood. The right lobe of the lungs was diseased, of a purple colour, and distended; the left lobe less diseased, in a contracted state, of a natural colour, except a few purple spots. The valves of the heart sound. A small quantity of water in the abdomen. No disease of the liver."

There is no date to the above interesting account; nor is the name of the surgeon who furnished it mentioned, which precludes me from acknowledging my obligations to him.

The great fullness of the pulse, the occasional palpitation, and laboured action of the heart in the early stage of the disease; the enlargement of the right auricle and ventricle, and the great disproportion between the thickness of their coats and those of the left side of the heart, may be accounted for by the incessant increased action of the former, which was necessary to overcome the resistance constantly opposed to the transmission of the blood through the lungs. The same causes produced the effusion into the pericardium.

Having seen the patient only twice; other practitioners having likewise prescribed for him, who did not regard the disorder what it really proved to be, and having conformed very irregularly to the

course of regimen and medicine judged necessary for him, a successful result could not be expected; nor could this have happened under the most judicious management unless it had been rigidly adopted at an early period, before the enlargement of the right auricle and ventricle commenced.

CASE LXXIII.

November 22.—Mrs. P. of Lavenham, Æt. 36. The mother of six children; has been getting corpulent for some years, for the last twelve months very rapidly; is now very fat with soft flabby fibre; countenance much bloated, inclining to a livid hue. Has indulged freely in malt and other strong liquors, at all times, especially when she suckled, which she did all her children; the youngest, six weeks old, now at the breast. Has the disease strongly marked, attended with great prostration of strength, and depression of spirits; a total want of appetite, and a feeble, quick, fluttering pulse.

Was permanently cured by the following medicines, aided by appropriate regimen, and died in 1806, of a cancer of the breast.

℞. Infus. Dig. P. ℥vß. T. Card. C. Sp. Æth. Vitr. C. āā. ʒij. Kali pp. ϑij. M. Sum. coch. duo ad tria ter ind. cum Pil. infra præs. No. ij.

℞. ferr. Vitr. ʒj. Myrrhæ ϑij. Zing. P. gr. xv. Confect. Ar. q. s. ft. Pil. xxiv.

Appl. Empl. Canth. pectori.

She was directed to wean the child.

The weakness being so great, tonics were at once

combined with the other remedies, and as soon as the water was evacuated, the digitalis was omitted and bitters substituted, together with small doses of calomel to complete the cure.

CASE LXXIV.*

December 16.—Mr. Mumford, of Thorpe Hall, Æt. 66. Brother to the subject of case 9. Tall, of a florid complexion naturally; but his countenance now of a dark red inclining to a leaden hue. His life has not been marked by intemperance or any excesses; has lived well and used regular, sometimes violent exercise. *Incipient*, but clearly marked symptoms of hydrothorax. Breathing quick and hurried, more especially on any sudden exertion or emotion, which has for some time obliged him to lie down in bed with his shoulders high; awakes from sleep generally much hurried, and is obliged to sit up suddenly in bed, owing to a distressing sense of anxiety and oppression about the præcordia; a sense of fluttering, amounting at times to palpitation, about the heart and epigastrium; ankles only are slightly œdematous at times toward night; but his face, feet, and legs are much colder than natural, and of a livid hue; thinks the urine is not much affected; pulse extremely feeble and fluttering without any regular action; some cough, with difficult

* Referred to from case 9 as case 79. Having taken exact minutes of this interesting case at every visit, they shall be correctly detailed as I find them in my report book.

expectoration. All the other functions are natural, except that the strength is somewhat reduced and that he is less equal to bodily exertion. He however hunted yesterday, and his breathing was sensibly relieved when he became uniformly warm and began to perspire, though before he laboured extremely for breath.

Has been subject to severe colds, and about two months ago had a violent attack, from which he dates the present illness. For several months, however, he has remarked that his breathing has been at times affected, and that he felt himself less equal to bodily exercise.

It is probable that there is incipient ossification, or some defect of the valves of the heart; and though the disorder may be checked for some time, a permanent cure is not to be hoped for. On the whole I apprised the family that I considered the case as indicating a *breaking up* of the constitution.

℞. Tinct. Tolut. ʒjß. tere cum Muc. G. Ar. q. s. Adde Infus. Gent. C. ʒx. Sp. Æth. Nitr. gt. ʒo. T. Dig. Purp. gt. xv. ad xx. Kali pp. gr. vj. M. ft. Haust. ter ind. s.

℞. Mass. Pil. Scillæ ʒj. Myrrhæ ʒß. Flor. Benz. ϑj. Muc. G. Arab. q. s. ft. pil. xxiv. Sumt. tres sing. noct. h. s.

℞. Picis Burg. Empl. Canth. āā. p. æ. Liqt. simul et ft. Empl. satis amplum pectori applicand.

A proper regimen was enjoined. Calomel was not judged necessary here.

December 25.—Is very much improved in strength, appetite, and in his looks; can walk with more freedom, and lie down and sleep without inconvenience; urine very much increased in quantity; pulse less frequent and now beats a few regular pulsations in succession. No œdema of ankles since last report; feet, and whole body warmer. Digitalis has been increased to twenty drops; the plaster has produced extensive vesication. Pergat U. A.

From this period he continued gradually to recover; and during the following year enjoyed tolerable health. He found it necessary, however, to conform strictly to regimen, and to have recourse occasionally to his medicines, especially during the cold winter months which affected him very much.

On the 4th of May, 1804, my attendance was again desired. He had been ill some weeks, the usual remedies not having succeeded. The disease had now assumed a more formidable aspect, all the former symptoms returning with greater violence, the legs being swelled, and the urine less in quantity than before.

From this attack, and from similar returns, he was again and again relieved, the medicines having to the last succeeded in evacuating the water. He died the following year, not of dropsy, but of completely exhausted constitution.

CASE LXXV.

March 25, 1803.—Mr. C.* of S——, of very short stature, thick make, and corpulent, Æt. about 35. Subject for years to coughs, with copious expectoration. After a very severe attack of the Epidemic Influenza of this spring, has the symptoms of the disease very clearly marked; the cough is extremely harrassing, and the expectoration though copious, very viscid; pulse irregular and sometimes intermitting. Has indulged freely in the use of wine, and frequently at night after supper.

Was permanently cured, by persevering for some weeks with great attention in a course of digitalis, squills, calomel, and the warm expectorants, with suitable regimen.

CASE LXXVI.

May 4.—Mrs. E. the subject of case 12. I find again in my report book, labouring under the disease, of which she was speedily cured.†

* The case referred to p. 112 and 113 of the history. Was in his usual state of health in March, 1809, except that he had not lost his cough, accompanied with copious yellow expectoration.

† She had several attacks, but in a slight degree, after this period, which invariably yielded to the same remedies; and while correcting the present sheet for the press she is under my care, and recovering from a formidable attack of paralysis hæmiplegia, attended at first and for some days, with alarming symptoms of compression on the brain. The power of voluntary motion of one side is entirely lost. April 6th, 1809.

CASE LXXVII.

June 12.—Mr. C. of Bromley, Essex, Æt. 52. Had been very corpulent for some time before the present attack; and indulged frequently to excess in the use of intoxicating liquors of every kind. Has been subject for several years to attacks of hard dry cough, and for about two years has observed his breathing at times to be short and difficult on any unusual or sudden exertion. Had the influenza last spring with great severity, since which the symptoms of hydrothorax have commenced, and of late increased to so alarming a degree, that for several nights his life has been dispaired of. He is struggling incessantly for breath, by day as well as by night, but more especially on attempting to sleep, when he is suddenly roused and threatened with immediate suffocation. The head, neck, and chest are for the most part covered with profuse sweats, appearing in large drops; pulse quick, hard, and at times unequal; frequent palpitation; urine very little altered in quantity or quality, but on cooling becomes turbid; a severe hard dry cough, with expectoration sometimes tinged with blood; legs much swelled, especially toward night, and readily pitting on pressure. The disorder was not regarded by his physician as hydrothorax, but being considered as such by the intelligent practitioner, Mr. Silke, of Manningtree, who constantly attended him, and the various remedies prescribed proving of no avail, my attendance was urgently desired in the night.

Few cases occurred to me more distinctly marked, more immediately alarming, or marked by greater anxiety or suffering. I however held out a prospect of relief provided the medicines reached him in time.

℞. Infus. Dig. P. ℥j. Sp. Æth. Nitr. gt. 40. Tinct. Benz. C. gt. 40. cum Muc. G. Arab. ʒj. trit. Mell. Scillæ ʒj. Kali pp. ℈j. M. fiat. haust. ter ind. s.

℞. Cryst. tart. P. ℈j. Calom. gr. j. Scillæ P. grß. ad gr. j. Syr. Zing. q. s. ft. bolus. sing. noct. h. s. s.

Weak gin punch, free dilution, and appropriate regimen were enjoined.

June 17.—Almost immediate relief of all the symptoms from the medicines; breathes with perfect freedom, and can lie down without inconvenience; cough and expectoration nearly gone; urine much increased; legs only a little swelled at night. On the 14th, being sensibly under the influence of the foxglove it was discontinued. His sleeps are uninterrupted now in a recumbent posture. Complains of great weakness, especially of the lower extremities.

Was put on a course of tonics, diuretics, and expectorants, with calomel, till the gums should be affected.

From the above period he continued to mend: came to Sudbury, the distance of more than twenty miles twice in the course of the summer, and recovered so far as to follow his ordinary occupation; but laying aside medicine, and disregarding the rules laid down for him, as soon as the water

was evacuated, and the disorder, as he imagined, cured, the symptoms after a certain time returned. He continued to have relapses from these causes, but which always yielded to medical treatment. At length, however, becoming extremely impatient under the restraints which were imposed upon him, he refused all medicine, and giving full scope to his propensity for drinking, he died in the course of the following year, as far as I recollect, without any external signs of dropsy, though at different periods of the disorder the legs, thighs, and whole body were enormously swelled. For several months prior to his death, he might be said to have lived principally on sherry and spirits, in which he indulged at all hours of the day.

CASE LXXVIII.

July 16.—Mr. Pratt, of Belchamp, a farmer, Æt. 46. Corpulent; in the habit of using much exercise, but of living freely at times. Came to me with hydrothorax, and from the peculiar fluttering about the heart, and feeble irregular pulse I was led to suspect water in the pericardium. He was prescribed the usual remedies. He continued to call for my advice for some years, always receiving relief from medicine; but the disorder returned after a certain period. In the year 1806, he consulted Dr. Bailey, of London, who prescribed among other remedies, calomel, by which he was salivated. During, and for some time after the salivation, the dropsical symptoms were so far sus-

pended that he fancied himself cured. I had not seen or heard of him for several months till the 16th of February, 1807, when his surgeon apothecary called to say he was again extremely ill, but he thought not in imminent danger, and that I was desired to attend him. My engagements being at that time urgent, I could not fix an earlier day than the 20th, for visiting him. As I was setting off for that purpose a messenger arrived to say he died in the night.

CASE LXXIX.

July 31.—Mr. Manning, a farmer, of Sible Hedingham, Æt. about 22. Strongly marked symptoms of anasarca pulmonum, hydrothorax, and general anasarca, together with urgent cough. His father died a few years before of a similar disorder. I once prescribed for him.

℞. Infus. Dig. P. ℥vii. Tinct. tolut. ʒij. cum ov. Vit. q. s. trit. Sp. Æth. Nitr. ʒiij. Kali pp. ϑij. M. Sum. coch. tria ter ind.

℞. Cryst. tart. ϑj. Calom. gr. ij. Scillæ P. gr. j. Syr. Zing. q. s. ft. bolus sing. noct. h. s. s.

Cold gin punch ad libitum.

August 28.—Came to me to say that the disorder was speedily removed by the remedies prescribed, but that within a few days his breathing has been again affected. Was directed a similar mixture, and the following.

℞. Calom. Gambog. G. aa. gr. ij. Cryst. tart. ϑj. Syr. Zing. q. s. ft. bolus sing. noct. per Sept.

integram s. When the water was evacuated, the following was directed for him.

℞. Infus. Gent. C. ℥vij. Sp. Æth. Nitr. Tinct. Cort. Aur. a. ℥ß. Kali pp. ʒj. M. Sumt. coch. tria mane et merid. cum Pilul. infra præs. No. ij.

℞. Calom. gr. vj. Scillæ P. gr. xij. Cryst. tart. ℈j. Myrrhæ ℈ij. Syr. Zing. q. s. ft. Pil. xxiv.

Was permanently cured by these remedies.*

CASE LXXX.

January 2d, 1804.— Mr. S. wine merchant, of Colchester, Æt. 66. Tall; and not corpulent. Has lived well, but not addicted to excesses in drinking, and has used much exercise. Till lately enjoyed good health. Has the ordinary symptoms of the disease very strongly marked, together with an irregular intermitting pulse; fluttering, and palpitation of the heart; inability of lying down, and great prostration of strength. Face, hands, and feet, livid and cold; the ankles only are œdematous.

His complaints were repeatedly removed, and he thought himself cured, by the usual remedies; but after a certain time they returned, on laying them aside; and finding there was no prospect of permanent recovery, he at length retired into the country, and died I think the following winter.

* I heard from Mr. Holdich, the practitioner who attended with me, that he was in good health, in March, 1809.

CASE LXXXI.

February 15, 1805.—Mr. Firmin, a farmer, of Maplestreet, Essex, Æt. about 65. Of short thick make, and corpulent. Has the disease in a most alarming degree, with considerable swellings of the legs. Was quickly relieved, and remained free from the disorder, for several months.

I was informed that he relapsed afterwards, and died suddenly, before the family practitioner who had been in attendance could reach him.

CASE LXXXII.

February 28.—Mrs. F. of Colchester, Æt. about 65. Was permanently cured of the disease, under the most unpromising and even hopeless circumstances.*

CASE LXXXIII.

June 20.—Master Good, Æt. 12. Of a remarkably fair complexion, and delicate constitution; extremely weak and emaciated. Breathing short and difficult, body very much distended, with fluctuation; thighs, legs, and scrotum much swelled; scanty urine; no appetite; pulse regular.

* This interesting case having been communicated to the late Dr. Hamilton, of Bury, and published in his Observations on Digitalis, p. 199. I must refer the reader to that work, in which he will meet with much useful information on this subject, and the opinions of the different authors who have written upon it, brought into one view: it was intended to shew the inefficacy of the foxglove alone, in certain instances of the disease.

The dropsy supervened to an illness he had at school; and there is reason to suspect mesenteric affection.

℞. Scillæ P. Calom. āā. gr. vj. Cryst. tart. ℈j. Conf. Ar. q. s. ft. Pil. xij. Sumt. ij. sing. noct. h. s.

℞. Ferr. Vitr. ℈ij. Kali pp. ℈j. Myrrhæ ʒß. Extr. Gent. q. s. ft. Pil. xxiv. Sum. ij. mane et merid. cum Mist. seq. coch. No. ij.

℞. Infus. Gent. C. ʒvß. T. Cort. Aur. Sp. Æth. Nitr. aa. ʒij. T. Dig. P. gt. xxx.

Here it was judged necessary to begin at once with tonics in combination with calomel and the usual diuretics, and the peculiar paleness, or rather whiteness of the skin, pointed out the propriety of the preparations of iron. The hair was perfectly white also.

June 29.—Came to me in every respect much better. Pergat.

July 6.—Continues to mend rapidly; and his mother thinks he gets flesh as well as strength; the swelling of the body so much reduced that he can button his waistcoat.

Adde Kali pp. ℈j. Mist. olim. præs. et pergat U. A.

July 13.—Mends progressively. Had a fall which has occasioned a pain of the side.

Adde ol. M. Pip. gt. ij. Mist. et pergat U. A.

July 30.—His mouth having been affected by the calomel on the 25th, it was discontinued; its effects now gone. Swellings entirely disappeared, and all

the functions natural. Was desired to lay aside the medicines gradually.

Called upon me several times afterwards perfectly recovered.

CASE LXXXIV.

July 30.—Mrs. R. of Pentlow, Æt. about 55. Somewhat deformed about the chest. Came to consult me on the 4th, with symptoms of general debility, and slight œdema of the ankles; and again on the 8th, labouring under universal dropsy; the breathing being very quick and hurried, with inability to bear the recumbent posture; pulse feeble, quick, and irregular; the urine scanty; legs and thighs much swelled; bowels very irritable. The progress was extremely rapid. The disorder evidently arose from fatigue, and confinement with her husband during a tedious illness, of which he had recently died, as well as to grief and ill treatment experienced since his death. By the aid of steel, myrrh, bitters, crystalls of tartar, and calomel, all the unpleasant symptoms were quickly removed, and she is recovering her strength rapidly, her appetite being, as she says, too good. The breathing is perfectly free; the pulse full and regular; the swellings intirely gone.

℞. Ferri Vitr. Myrrhæ aa. ℈ij. Kali pp. ℈j. Extract. Gent. q. s. ft. Pil. 24. Sum. ij. mane et merid. cum Mist. infra præs. coch. iij.

℞. Inf. Gent. C. ʒvß. T. Cort. Aur. Sp. Æth. Nitr. a. ʒij. T. Dig. P. gt. 60. Kali pp. ϑij. M.

August 18.—Has been constantly under the influence of mental depression and irritation from the ill treatment she continues to experience from her husbands relatives. Within a few days threatened with a relapse, having been suddenly roused from sleep by a sense of suffocation. P. full and laboured; has much feverish heat and thirst. To return to the medicines prescribed the 30th of July.

October 26.—After deriving equal benefit from the medicines they were as before discontinued; the disorder has again returned.

She was repeatedly relieved by the same means, but died some months afterwards, of exhausted constitution.

In this case the bowels were so irritable that squills were not used. The other remedies performed all that could be hoped for from medicine.

CASE LXXXV.

July 22.—Mrs. P. of Middleton, Æt. 67. Very corpulent for some years. Has laboured under the disease for several weeks; but in consequence of sitting up constantly in a chair, and of medicines she has been regularly taking, the breathing has been of late much relieved, but the legs and thighs are enormously swelled, and so hard and tense as not to yield in any degree to the pressure of the fingers. The cuticle is burst in some places about the legs, and discharges much serum. In this case

the foxglove was productive of no beneficial effect, though she was repeatedly under its full influence both before and after my attendance. By the aid of calomel, squills, crystalls of tartar in full doses, with now and then an active purgative, the kidneys and lymphatics were at length with great difficulty acted upon, and she was more than once unloaded of the water. She lived several months after my first visit.

CASE LXXXVI.

September 20.—Mrs. Cook, of Stoke, Æt. 70. Of short stature. Has lived a sedentary life for some years. Had the disease in a violent degree, together with ascites and anasarcous legs; unable to lie down in bed for several nights; and when she attempts to sleep in her chair is suddenly roused and obliged to go to the window for breath. Is costive; urine very scanty with the usual sediment. Pulse intermitting. Has been treated judiciously, and placed under the full influence of the foxglove, without any benefit, before I saw her. She was prescribed the usual combination; but on my next visit the 25th, finding she derived very little advantage, and was unwilling to persevere in medicine, I did not urge it, and discontinued my visits. She did not survive long afterwards.

CASE LXXXVII.

October 26.—Mr. Davy, a farmer, of Toppesfield, Æt. about 55. Incipient, but distinctly marked

symptoms of the disease. Has lived intemperately. Strength and flesh much reduced; and has no appetite. Was prescribed tonics, saline diuretics, and squills without the digitalis.

November 8.—Deriving but little benefit he was directed the infusion of foxglove with the ordinary diuretics, and a blister to the chest.

By these means the disorder was removed; but has been obliged to have recourse to them frequently since, always with success.

In March last, 1809, he was in tolerable health.

CASE LXXXVIII.

April 22, 1806.—Mrs. P. of Belchamp Otten, Æt. about 30. Naturally of a very delicate constitution, of low stature, and much deformed about the chest. The mother of two children. Has the symptoms of the disease very strongly marked, together with cough, anasarcous legs, and extreme debility.

By means of tonics, digitalis, saline and other diuretics, the water was repeatedly evacuated, and the symptoms relieved; but, as I have almost invariably experienced in circumstances of distortion of the body, this was effected with difficulty, and a permanent cure could not be performed. The disorder was kept in check for several months, but at length triumphed in spite of every effort to subdue it. She died universally dropsical.

CASE LXXXIX.

June 21.—Mr. K. of Ovington, a farmer. Of very short stature, thick make, and corpulent. Æt. about 50. Has been accustomed to drink spirits and water, and beer, at all times of the day, but not to intoxication, as is too much the practice of the country. Has likewise suffered much mental anxiety and uneasiness. Has the disease distinctly marked, but as yet in a mild degree, and may be said to be in the incipient state. He has been, however, for some time unable to lie down in bed; the urine is scanty, and the ankles are slightly œdematous. The appetite and general strength are much impaired; and the muscular fibre is soft and flabby. The complexion is changed from a florid red, to a bloated leaden aspect. Yet he still pursues his ordinary occupation.

℞. Calom. gr. j. Scillæ P. gr. jß. Cryst. tart. P. gr. vj. Conf. Ar. q. s. ft. Bolus sing. noct. h. s. s.

℞. Inf. Gent. C. ʒix. Kali pp. gr. x. T. Cort. Aur. ʒij. Sp. Æth. Nitr. ʒj. M. ft. Haust. mane et meridie cum Pilul. infra præs. No. ij. s.

℞. Ferri Vitr. Kali. pp. Myrrhæ a. ℈j. Conf. Ar. q. s. ft. Pil. xvj.

℞. Calomelan. Resin. Jalapii aa. gr. iij. Cryst. tart. P. ℈j. Confect. Ar. q. s. ft. bolus bis terve in Sept. vel pro re nata s.

The digitalis was not judged necessary here, and the cure was completed without it; not however

without an entire change in all his habits. Has had slight returns, but by the timely use of the medicines, especially of the boluses, and by more than ordinary circumspection in his mode of living, they have been readily removed, and he has for some time enjoyed better health than for many months before the attack.

CASE XC.

November 18.—Mrs. Candler, of Sommerton, Æt. 50. Naturally corpulent; and has lived a very sedentary life, being much confined to a shop. Universal anasarca, every part of the body, except the face and neck, being affected. The legs, thighs, hips, and arms are enormously distended, hard, tense and resisting. Breathing extremely difficult and laborious, so as to have prevented her from lying down for several weeks; has constant drowsiness, and though she sits up in bed is frequently roused and awakes hurried; urine very scanty and high coloured; pulse 80 full and laboured; face livid; the nose, hands, and feet are extremely cold; B. costive with flatus; T. of a florid red colour and aphthous; "she could eat" she said, "but had no room for food." The only exercise she has been able to take for weeks, has been from the bed to the chair and back again, and this not without assistance.

In February last had a severe acute rheumatic affection of the right thigh and hip, from which she recovered slowly, and to which she attributes the present complaint, having been confined ever since,

the difficulty in breathing and swelling of the legs having commenced soon after.

On observing to Mr. Harrington, the practitioner who attended with me, that this was not a case for the foxglove, he said she had taken 40 drops of a tincture made with ℥ ß. of the dried leaves to ℥ viij. of proof spirits three times a day, he thought with some relief. She was prescribed calomel and crystalls of tartar, at bed time, a cordial diuretic draught with three drops of the Tinct. Dig. three times a day, and frictions with the Lin. Camph. to the swellings.

On my next visit the 23d. I found her sensibly relieved; but on seeing her again on the 27th, not receiving that sudden benefit which she expected from medicine, which however was taken very irregularly, she signified her determination to lay it aside and to submit to her fate.

On the 19th of May I was desired to see her. I was informed that after my last visit the swellings and her sufferings continued gradually to increase; that at one time she vomited almost incessantly for several days, during which her life was every hour looked for; but that, however, to the great surprise of her relatives, the swellings abated, during the vomiting; that the stomach had of late retained more food, and that she signified a desire of taking medicine, provided it was compressed in the smallest possible compass.

The whole body was now enormously swelled, even the face and neck, which were before free; the

pulse could not be felt till the water was pressed out of the cellular membrane at the wrist; and it was now extremely small and frequent. She was entirely confined to her chair, being unable to move any part of the body, even her arms, both from their great bulk and weight, as well as from the rigidity and hardness of every part. Tongue, insides of the lips and cheeks covered with painful apthæ, from which a ropy matter was constantly discharged; gums soft, spongy and livid. In short she exhibited a picture of the greatest misery I had ever beheld.

Precluded from prescribing any thing except in the form of a small pill, she was directed to take two grains of calomel and one of elaterium every night, and a quarter of a grain of opium to be added if necessary.

May 27.—The pill has operated powerfully either on the stomach or bowels or both, and has brought off considerable quantities of water, while the secretion by the kidneys, which was before nearly suspended, is at the same time greatly increased also. The swellings of the face, neck, hands and arms nearly gone, and that of the rest of the body much reduced and softer, with proportionable freedom in breathing, in so much that she was able to lie down in bed yesterday three times without inconvenience.

Having directed cabbage leaves to be applied to the legs and feet a copious exudation of water has been the consequence; and the cuticle has separated in many places, in the form of vesicles filled with water. Pulse felt more distinctly; and

she takes liquid nutriment freely, but swallows with great difficulty, the aphthous affection being worse and extending down the œsophagus, attended with profuse salivation, but without that fœtor attendant on mercury.

I directed a continuance of the pill with a quarter of a grain of opium.

June 8.—The pill continues to operate powerfully with proportional reduction of the swellings and relief of every symptom. The discharge from the legs profuse also; the urine in full quantity and natural in colour. The opium was omitted as she thought it checked the salutary operation of the pill. Spirits, strength, and appetite improve; she lies down in bed, takes food more freely and with a relish. The elaterium continuing to act too violently it was reduced to half a grain. The amendment from this time was so rapid that hopes were entertained of her permanent recovery. She was able not only to ride out daily in an open chaise, but to walk about the house; and the only swellings which remained were about the ankles in a trifling degree towards evening, the discharge having nearly subsided. The stomach and bowels became so susceptible of the action of the elaterium that it was found necessary to reduce it to a quarter of a grain, which produced a full effect.

Towards the end of the month, however, having discontinued the pill, the bodily strength and appetite began gradually to decline, and she died in July, literally of worn out constitution.

Is it not reasonable to infer that had a proper plan of medicine aided by regimen been conformed to in the first instance in this case the relief would have been more complete and permanent? Though the foxglove had not a fair trial yet I am confident it would have been productive of no good. The effects of the elaterium as a hydragogue were very conspicuous; yet, the objection to all such violent medicines of this class was evident also, the water having accumulated rapidly afterwards; but our efforts having been confined within such narrow limits, little more could have been expected than was effected. It is my intention to give this medicine a full trial; properly qualified and supported by other remedies, I entertain sanguine hopes of it, especially in such cases as the present, where the judicious Withering has told us, and which my own experience has amply confirmed, the foxglove is not to be depended upon.

This case as well as 82, was transmitted to the late Dr. William Hamilton, as of this description; but was not published lest, as he afterwards acknowledged to me, it should increase the prejudice which existed against this herb.

CASE XCI.

January 4, 1807.—Mrs. K. of Boxford, Æt. 58. Very corpulent; of a bilious habit, with lax fibre. Dyspnæa of the quick hurried and anxious kind, with a peculiar wheezing noise, increased on the slightest motion, so as to oblige her to stop several

times when going to her chamber; of late has been confined entirely up stairs; is frequently awoke suddenly from sleep with a sense of suffocation, attended with violent palpitation; has at all times a constant sense of fluttering about the heart; pulse extremely feeble, irregular and intermitting; a constant harassing cough, by which hard viscid lumps of condensed mucus are expectorated, sometimes streaked with blood; urine very scanty, with thick sediment. Legs and abdomen have been much swelled, but for a few days the swellings have nearly subsided, owing to an incessant sickness and vomiting as well as diarrhæa, with which she has been affected, and to her having been chiefly confined to bed. Every thing she takes, she says, is either quickly vomited or passes through the bowels, generally with much bile. Cheeks at times flushed, but the conjunctiva is yellow; nose, feet, and hands cold, and of a livid hue. During the paroxysms of difficult breathing, the chest, neck, and head become hot, and a profuse perspiration breaks out upon them. Of late unable to lie on the right side; no appetite, and weakness extreme.

I suspect water in the pericardium as well as in the other cavities of the chest. No case could be more strongly marked; and appearances could scarcely be more hopeless.

Took about 50 drops of the tincture of foxglove, and as many of the Sp. Æth. Nitrosi since last night.

Appl. Empl. Canth. Pectori.

℞. Inf. Dig. P. (℥j. ad ℥vij.) T. Card. C. ℥j. Sp. Æth. Vitr. C. Sp. Æth. Nitr. a. gt. 30. M. ft. haust. ter. ind. s.

℞. Calom. Scillæ a. gr. j. Muc. G. Ar. q. s. ft. bolus h. s. s.

January 7.—Nothing could exceed the contrast between her situation to day and on the 4th. Every organ is now performing its function nearly as in health. She breathes with freedom, can lie down in bed on either side, and goes to sleep without the dread of being suddenly awoke as before; the cough does not disturb her much, and the expectoration is free, thinner, and copious; has no palpitation; but the pulse though more distinctly felt, is as irregular as at first. Urine increased, from a quarter of a pint of a thick turbid yellow mixture, to three pints daily of the natural appearance. The temperature of the face and extremities natural; and the countenance has lost that expression of anxiety and suffering which were so strongly marked in it before. Has taken sufficient nutriment without being once rejected since the 5th, and the bowels are returning to their natural, only two motions yesterday and none to day. Swelling of the body much reduced. No unpleasant effect on the head or any organ from the foxglove. Has not drank the quantity of liquids directed.

Rep. Boli. sing. noct. U. A.

℞. Inf. Gent. C. ℥j. Tinct. tolut. gt. 40. cum Syr. Papav. Alb. ℥j. prius trit. Sp. Æth. Nitr. gt. 40.

T. Dig. Purp. gt. viij. M. ft. haust. ter ind. cum Pil. infra præs. No. ij. s.

℞. Ferri Vitr. Kali pp. a. gr. xv. Myrrhæ ʒj. Conf. Ar. q. s. ft. Pil. xvj.

Let the body be well rubbed with the Lin. Camph. and a flannel roller applied tight round it. The abdomen was extremely pendulous and soft. Her father and a brother died of dropsy.

January 10.—Continues to mend. Cough and expectoration nearly gone. B. natural. P. beats a few regular pulsations, and is much stronger. No sensible effect from the calomel. Has at times a sense of sinking and nausea at the stomach. Abdomen nearly reduced to its natural size.

Pergat in usu Bol. U. A.

℞. Infus. Gent. C. ʒx. T. Cort. Aur. ʒj. Sp. Æth. Nitr. gt. 50. T. Dig. P. gt. xv. M. ft. haust. mane et merid. cum Pil. olim. præs. No. ij. s.

January 14.—Mends progressively. Gums affected by the calomel; a sense of sinking at the stomach, together with giddiness and imperfect vision. Though she has been able to lie on either side yet she cannot remain long on the right.

Omitt. Calom. sed pergat in usu Scillæ, haust. ac Pilular. U. A.

I took my leave after laying down ample injunctions for her future conduct.

May 9.—My immediate attendance was desired, but being unable to wait on her till the 12th, I met a messenger on the road to prevent my proceeding.

as she was thought in the act of dying. I was informed afterwards by Mr. Wynne, the medical man who attended with me, that she laid aside medicine soon after I ceased visiting her; but continued to mend for some time; that in April she began again to complain, but having so great a dislike to medicine the disorder made considerable progress before he was desired to see her; and that for the same reason she resisted the intreaties of her relatives to permit my being sent for.

CASE XCII.

January 20.—Mr. H. of Sudbury, Æt. 75. Has laboured under the disease for some years at intervals; but was invariably relieved by remedies similar to those recommended in the foregoing cases, prescribed either by the family practitioner, or myself. Has been subject to severe coughs, attended with copious yellow expectoration, which have for many years become habitual, and assumed the form of the *Catarrhus Senilis*, subject to considerable aggravations at certain seasons.

Has of late had a severe attack, soon succeeded by strongly marked symptoms of effusion in the chest. Is now in the last stage, threatened with suffocation every moment, voiding scarcely any urine, coughing incessantly, but expectorating with extreme difficulty only hard viscid lumps of condensed mucus, with much florid blood. T. of a florid red colour, very dry, with a tendency to apthæ. Legs œdematous.—Died the following day.

CASE XCIII.

June 17.—Early this morning my immediate attendance was desired on the Rev. Mr. ——— of ——— near Harwich. His age 51, of tall stature, naturally robust and muscular, but of late years disposed to corpulency. His symptoms were, extreme difficulty in respiration, which has for some weeks prevented him from lying down in bed, or from walking but with great deliberation: when going up stairs, has been obliged to rest some minutes to take breath, before he reached his chamber; and although propped up by pillows, nearly in a sitting posture, in bed, he is suddenly roused from sleep by a sense of suffocation, and extreme anxiety about the præcordia, which obliges him to get up and walk about the room; of late this has happened three or four times every night, in so violent and alarming a degree that his life has been dispaired of; urine very scanty, of a dark red colour, but with very little sediment; pulse extremely irregular and intermitting; legs œdematous up to the knees, and readily pitting on pressure; tongue foul, with great thirst; no appetite; bodily strength much impaired; face and conjunctiva of a deep yellow tinge; and he brought up some yellow bile this morning. Bowels costive; memory much impaired, with giddiness, and confusion of ideas at times; constant drowsiness, amounting sometimes to stupor; hands and feet cold. Has not been addicted to intemperance in the use of intoxicating liquors, but in the habit of

indulging very freely in large draughts of beer, both at meals, and at all times when heated by exercise. Has used much bodily exercise till of late years, when his habits have been sedentary and studious, frequently sitting up till a late hour.

For nine years has been subject to a peculiar uneasy sensation in the lower part of the abdomen, from the umbilicus to the pubes, for which he has been in the constant habit of using active purgatives three or four times a week, as the only means which, he fancied, relieved him.

About two years since, when stooping to measure timber, was suddenly seized with a giddiness of the head, and confusion of ideas, nearly amounting to a fit of apoplexy, for which he went to town, and put himself under the care of an eminent physician. It was treated as an attack of apoplexy, for which copious V. S. and cupping were frequently used. He returned to the country much reduced in flesh and strength.

The first symptom of his present complaint was perceived in February, 1806, when he was suddenly roused from sleep, and thought himself in the act of dying. He had another attack when doing duty some months afterwards, and a third in December following: the pulse intermitted each time; recovered its former regularity after the first and second attacks, but has been more or less irregular since the third.

He has been attended by three physicians of the first eminence in town, and by one in the country.

Their attention appears to have been principally directed to the affection of the head, and to the peculiar sensation of the abdomen, acknowledging they could do nothing for the disorder of the chest. The result of a consultation held by two of them in town, in April last, was the recommendation of a seton in the neck, and mild inert palliative medicines. On the suggestion of Mr. Nunn, of Manningtree, the digitalis was once prescribed by one of them, but soon abandoned.

On the presumption that his complaints originated from water in the chest, Mr. Nunn and Mr. Silke his partner, who constantly attended, prescribed the digitalis in January and March last, with sensible advantage, as the pulse recovered its natural regularity both times: and Mr. Nunn reminding me of a case, apparently as hopeless as the present, in which I recommended the foxglove, with him, with complete success, lamented that the prejudice against it here was so strong, as to preclude him from prescribing it again.

On assuring the patient and his family, that the medicines I should recommend would produce no violent or unpleasant effects, they left me to proceed as I should judge fit, unfettered by any restrictions. Had a blister applied to the chest, and a calomel and squill bolus last night, which were the means of procuring some disturbed sleep.

℞. Calom. gr. vj. Kali Vitr. Myrrhæ Aloes a. gr. x. tere simul. et Conf. Ar. q. s. ft. Pil. viij. quamp. sumat ij. et repr. p. r. n.

℞. Calom. gr. jß. Scillæ P. gr. j. Cryst. Tart. P. ℈j. Conf. Ar. q. s. ft. bolus sing. noct. s.

℞. Inf. Dig. P. (℥jß. ad ℥viij.) ℥j. Sp. Æth. Nitr. ℥ß. T. Cort. Aur. ℥j. Kali pp. gr. x. Ol. M. Pip. gt. j. M. ft. Haust. mane, mer. et vesp. per dies tres, vel iv. s.

He was directed to refrain from beer; but to drink freely of negus or gin-punch, acidulated with crystalls of tartar; to have a few glasses of Madeira daily; and when his appetite returned, to have solid nutritive food, instead of the slops to which he had been accustomed. Mr. Nunn was requested not to continue the digitalis beyond the third day, if it should occasion the slightest nausea or unpleasant effect; and to substitute the Infus. Gent. C. for it; at all events not to persevere in it after the fourth day, having appointed to see him on the fifth.

June 22.—From voiding only half a pint of urine daily for some time prior to my first visit, he passed, by measure, five pints every day after the first 24 hours, with proportionable relief of every symptom. For two days had been able to lie down in bed, and enjoyed sound uninterrupted refreshing sleep: swellings of the legs gone; appetite and strength returning; was able to walk without assistance an hour and a half yesterday in his garden. Has had occasion to use the pills only once, the boluses having procured two motions daily without griping. No sickness or any unpleasant symptom from the foxglove. Took one draught to-day with the Infus. Gent. C.

Pergat in usu Haust. cum Infus. Gent. C. vice Inf. fol. Dig. Repr. Boli sing. noct. h. s.

June 29.—By previous appointment came 12 miles to meet me: Has continued to mend; rides out every day in an open chaise, and drives himself; appetite craving, and he has indulged it too freely, especially at night, in consequence of which his stomach was disordered one night; and he has complained of giddiness and confusion of ideas at times.

Appl. Empl. Canth. Nuchæ.

℞. Inf. Gent. C. ʒjx. T. Cort. Aur. ʒj. Acidi Nitr. gt. jv. ad. vj. M. ft. Haust. cum Pil. infra Præs. No. ij. s.

℞. Myrrhæ, Colomb. P. a. ℈j. Zing. P. gr. x. Ol. M. Pip. gt. jv. Syr. Zing. q. s. ft. Pil. xjv. Repr. Boli u. a.

July 8.—Came 17 miles to meet me, as previously agreed upon, and drove himself; continues to improve progressively; appetite more natural; and digestion good; head much relieved by the blister; has transacted business, and written letters, which required mental exertion. Walked up a hill yesterday a mile from home, and back again without inconvenience. Has recovered his natural florid complexion. Medicines to be continued, the draughts twice a day only.

July 22.—Came as before to meet me. The day being excessively sultry, and being exposed for near four hours to an intense sun, I was surprised to find him very little affected by the heat. On the 13th he complained of great pain in the lower part

of the abdomen, and in the course of the evening had three motions, consisting chiefly of dark grumous blood and a gelatinous-like substance; the last without any fæculent matter. He mentioned with much satisfaction, that he has been since free from this painful complaint, which had more or less constantly harassed him for nine years; and that for three nights the bowels performed their functions regularly without any assistance. The gums being slightly affected, directed the boluses to be taken only occasionally. Having been formerly recommended the shower bath, I permitted him to try it (especially as the weather had been intensely hot) every other morning. Acknowledges himself very much improved in every respect, and talks of making an excursion to Westmoreland in an open carriage. Was desired to go on as before.*

It may be sufficient further to remark that from this period Mr. H. either continued to meet me occasionally, or that I visited him at his own house, for some months. He became at length extremely impatient under the restraints imposed upon him, and notwithstanding every endeavour on the part of his amiable lady, the paroxysms of passion, when denied whatever he called for, were such as to render it impossible to keep him within bounds. Yet all that was possible, that the most tender and affectionate regard could dictate, was done by her. She persevered to the last, and to the last the remedies

* To this date the case was published in Dr. Hamilton's Work, p. 204.

did not fail to evacuate the water, and afford relief. His head, however, became more and more affected, and the bilious attacks more frequent and violent. He died on the 16th of July, 1808.—Yet the water was completely evacuated not many days before.

CASE XCIV.

August 10. 1800.—Mr. Clover, a miller, Æt. 53. Of very short stature, thick make, and corpulent. Has worked hard, lived well, but not addicted to excesses in drinking. Has orthopnœa of the most distressing kind, even without any motion or exertion, being obliged frequently to raise his head suddenly, and to elevate his shoulders and arms at the same time, while he makes several laborious efforts to draw his breath; inability of lying down in bed for a fortnight, before which he could only lie on the right side. Is frequently roused from sleep suddenly, though he is supported by pillows in a sitting posture in bed. Urine high coloured, diminished in quantity, but without sediment; legs anasarcous to the knees, hard, resisting, and of a dark red colour; pulse full, and occasionally an intermission during the paroxysms of orthopnœa; face livid; no cough, pain of the chest, numbness of the shoulders, nor swelling of the abdomen; a peculiar oppression not only of the epigastrium but of the whole body; great debility and no appetite; much thirst. Disorder commenced about December last, without any evident cause, and has been gradually increasing since. Has used various medicines with-

out advantage, and was prescribed the following lately by a physician of extensive practice who attended him.

℞. Fol. Dig. P. 3 ß. Aq. ferv. ℥xij. Infunde et ft. Infus.

℞. Infus. Colat. ℥j. Sp. Æth. Vitr. gt. 20. Tinct. Opii. C. ♑ij. Aq. ʒij. Olei M. Pip. gt. ß. M. ft. haust. 5tis. vel 6tis. horis s.

No sensible effect or relief was produced. I prescribed as follows.

℞. Infus. Dig. P. (ʒjß. ad ℥viij.) ℥j. Sp. Æth. Nitr. ʒj. Kali pp. ♑j. M. ft. haust. ter ind. s.

Appl. Empl. Canth. pectori.

℞. Calom. Scillæ a. gr. j. Opii gr. ß. Crystall. tart. P. gr. vj. Muc. G. Arab. q. s. ft. bolus sing. noct. h. s. s.

I consider the case in every respect as very unpromising.

August 15.—In 36 hours after beginning the medicines was sensibly relieved, and has continued to mend ever since, the urine flowing in full quantity, and the breathing and every other symptom being proportionably relieved; though he has taken his medicines very irregularly. Pergat, U. A.

August 23.—Improving in every respect, gaining strength, and able to walk out daily; lies down in bed, and breathes in every posture with freedom; more so in bed than in any other. Was directed to persevere in the same plan.

The water was repeatedly evacuated, and the symptoms were relieved by these medicines, but he

relapsed soon afterwards, and at length laying aside all medicine, the disorder increased and proved fatal, not many months after my first visit.

Though this case was omitted in its proper place, yet it is thought worthy of insertion here, not only as being in itself interesting, but as shewing the inert practice too generally adopted in this disease.

Several cases are recorded in my report book beside those detailed above, but as the results were the same, and it is feared they may have already been multiplied and extended beyond due bounds, I shall proceed to lay before the reader those from Morgagni and other writers, which it is hoped may be thought interesting, since they are accompanied with the appearances after death.

APPENDIX.

No. II.

INTERESTING CASES AND DISSECTIONS,

FROM

MORGAGNI, VALSALVA, AND OTHERS.

BOOK II. LETTER XVI.

FROM VALSALVA.

CASE I. Obs. 2. p. 378.

Hydrops Pectoris, Pericardii, and Polypi.

" A woman Æt. 20. Of a bad habit of body, thirsty, having a slight cough, and spitting up a kind of catarrhous matter, was married. Some days after her nuptials she was compelled to take to her bed. Her pulse was frequent, quick, and low; her cough troublesome, with but little expectoration; and her thirst great. Her feet swelled, and became œdematous; and so much the more as the disorder became the more violent: and even now her face

also, her arms, and her hands, were affected with the same kind of swelling. There was a sense of immoderate heat in the left part of the thorax; sometimes a tightness of the præcordia, and a difficult respiration; so that she was obliged, as the disorder increased, to breathe with her *neck erect*. Wherefore she died within a few days."

DISSECTION.

"A little serum in the abdomen; and the spleen larger than natural.

In the thorax the lungs were free from the pleura, but they were hard. The quantity of water in each cavity was such that a portion of it burst forth on cutting through the sternum; and the same kind of water was contained in the pericardium, to the quantity of about five ounces. Being exposed to the fire the former coagulated, the latter did not. There was a polypous concretion in both the ventricles of the heart; that in the right the largest."

CASE II. Obs. 4.

Hydrops Pectoris, with Polypus.

"A woman Æt. 26, who had been more than once pregnant, swelled in her whole body slightly; but much more in the abdomen, after great uneasiness of mind. She also breathed with great difficulty and with her *neck erect*, lay down on either side laboriously, and felt a great weight in the

thorax; she thirsted greatly; till at length her difficulty in respiration getting more violent, she died."

DISSECTION.

"A little water in the abdomen; the stomach being very turgid and the liver large, had driven the diaphragm so far upwards, that the cavity of the thorax was much lessened thereby. The thorax was entirely full of water; the lungs red, in some measure hard, with black spots, but in other respects sound. A polypus in the right ventricle of the heart."

CASE III. Obs. 6.

Hydrops Pectoris, and Pericardii, enlarged Spleen.

"A man Æt. 40. Had laboured under a slow fever for some weeks. To this was joined a tumour of the feet, a dry cough, and dryness of the fauces. He breathed very short and quick, with his *neck erect:* his pulse was scarcely perceptible. He died suddenly."

DISSECTION.

"The spleen was three times bigger than its natural size.

In both the cavities of the thorax a limped serum was found. Lungs sound, free and unconnected, except a slight adhesion of the inferior part of the left lobe. The pericardium was dilated, and contained more than half a pint of limpid serum. The

heart was enlarged, and in the right ventricle was a lax polypous concretion; which certainly is a circumstance not very rare in the heart of those who have water stagnating in their cavities. The thoracic duct, and the lympheducts also in the belly, were so far become empty that no traces of them could be found."

CASE IV. Obs. 8.

Hydrops Pectoris, with Polypus.

"A woman Æt. 70. Had a difficulty in breathing and could only lie on her back; she had a slight cough, spat up a catarrhous matter, and was very thirsty: her pulse sometimes scarcely perceptible: the right foot had an œdematous swelling. Before she died, she threw up by vomiting, a fluid of an æruginous colour. In each cavity of the thorax serum stagnated to the quantity of *three pints*. Each lobe of the lungs was connected anteriorly with the pleura. In the right ventricle of the heart was a small polypus."

Some judicious observations are added; such as the not being able to lie on either side but on the back, owing to the water being equally collected in both cavities, but not so as to fill either.

CASE V. Obs. 10.

Dropsy of the Chest, and Water in the Head.

"A young woman (age not mentioned) having been troubled with a cough, thirst, and difficulty in

breathing, was particularly oppressed thereby in the last nights of her life: when she coughed she brought up a catarrhous matter: she could not lie down on the left side by reason of the straightness of the præcordia; for which reason she lay on the right. Her feet were turgid with an œdematous tumour; her face and belly were also swelled, but the latter slightly only. About three days before her death she was in a manner lethargic, and had a hesitation in her speech; and the last two days her pulse was entirely imperceptible."

DISSECTION.

"In the abdomen were three or four pints of serum; with scarcely any traces of lyphatic vessels. Lungs sound; in the left side loose and free; in the right closely adhering to the pleura. In the left cavity was a small quantity of serum; in the right, whatever space was left vacant between the pleura and lungs was filled up with a yellow serum. In the ventricles of the heart was a fluid blood, without any signs of a polypous concretion. Lateral ventricles of the brain contained some serum slightly tinged with blood."

Judicious observations are added on the *Ratio Symptomatum.*

CASE VI. Obs. 12.

Hydrothorax of left cavity.

"A woman Æt. 70. Of a sanguinous temperament, and fat, while she was constantly attending

upon her son, who had a pleuritic fever, being seized with a pleurisy herself, got rid of it after many days, without any expectoration of matter. But a sense of great oppression in the left part of the thorax, immediately succeeded to the pleurisy; so that she could not breathe in bed, unless she lay on her right side. She spat up a *catarrhous* matter, was extremely thirsty, and had a swelling in her lower limbs. To these disorders, about four months after, was added a violent diarrhæa, which was troublesome to her, frequently, every day, and lasted for three months. In this space of time a fever returned at a certain period, with cold, heat, and pain of the head. All these symtoms continuing, she died at the end of the seventh month from the beginning of the disorder."

The learned author attempts here to explain the reason why she lay with most ease on the side which contained no water, but not with his usual success. Unless the polypus concretion was the cause, it is difficult to account for what appears an exception to a general rule.

DISSECTION.

" In the right cavity of the thorax was no disorder at all, but the left was full of water, in which some kind of filaments swam. Yet the lungs were sound. In the right ventricle of the heart was a large polypus, which extended itself from thence into the vena cava.

CASE VII. Obs. 14.

Hydrops Pectoris, Polypi, &c.

"A woman Æt. 50. Of a thin habit, and pale colour, having laboured under a dyspnœa, for a year, and the disorder increasing upon her, was at length received into the Hospital of St. Mary de Vita, at Bologna.

Her respiration was extremely laborious, her thirst great, her pulse moderately quick and small; which faultering more and more every day, she died. In the left cavity of the thorax the lungs were sound, and every where free; but swam in a pint and a half of saltish water. And the right lobe of the lungs adhered so closely to the pleura, as to be one continued body with it. In the heart were three polypous concretions, resembling condensed mucus." Some very interesting remarks follow.

CASE VIII. Obs. 17.

Water in the Chest, and Pericardium, Polypi.

"A virgin Æt. 15. Was troubled with an acute fever, attended with a dreadful pain of the head; for all her other symptoms were mild. About the tenth day the fever seemed to remit. But after a few days, a great thirst, a laborious respiration, and a pain in the left part of the thorax, were added to the fever. The two last mentioned symptoms growing more violent within a few days, being

perfectly in her senses, and having the free use of her speech, she died, contrary to the expectations of those who were about her."

DISSECTION.

"The lungs were sound: but the left cavity of the thorax was full of serum, like the urine of horses, in which some concretions swam, that resembled the white of eggs. In the right cavity also was serum, though in very small quantity. But in the pericardium was such a quantity, that it filled the whole cavity, and was more thick, than that in the thorax. Polypous concretions in the ventricles, like condensed mucus."

Very pertinent remarks are added, among others, that dropsies arising after acute disorders are bad, for they do not free the patient from the fever, and are very painful and mortal.

CASE IX. Obs. 19.

Dropsy of the Pericardium.

"A virgin Æt. 22. Was not able to breathe unless with her neck erect; she had great thirst and a considerable cough, and threw up a kind of purulent matter from the lungs, which was sometimes tinged with blood; she had a fever, her face swelled, and at length she died. In the belly were some pints of water. The right cavity of the thorax was full of serum; of which there was also a less

quantity in the left. The substance of the lungs was in some places red, in others white, but in other respects sound. The whole pericardium was full of water. In the ventricles of the heart was nothing but a fluid blood."

CASE X. Obs. 21.

Hydrops Pericardii.

"A certain man, whose feet had been affected for some time, with an œdematous tumour, was seized with a slight fever: his respiration became difficult, and more difficult every day, so that he was forced to breathe with his neck strait; he coughed, and spat up a catarrhous matter with it; he had also a great thirst: at length he died.

On *Dissection* the pericardium was found full of water."

The author very justly remarks that there was no symptom here which does not attend dropsy of the chest, with or without water in the pericardium.

CASE XI. Obs. 24.

Hydrops Pericardii.

"A boy, from being in the beginning, a lively, brisk, and well coloured youth, became sad, slothful, with his eyes less vivid than usual, pallid, and his lips and eyebrows verging to a leaden colour. If he walked a little faster than usual, or went up stairs, his respiration became difficult, and the palpitation of the heart, with which he was constantly

troubled, more violent. The disorder then greatly increasing, he lost his appetite for food, and the strength of his body, the extremities of which were constantly somewhat cold, and his feet very much swelled; but his pulse was always very soft, weak, small, frequent, and somewhat unequal. Finally, being taken with a slow fever, he died. Water was found in the pericardium. From Vieussens Tratié du Coeur, Ch. I."

CASE XII. Obs. ib.

Water in the Pericardium only.

"A man of a melancholic temperament, who had always been extremely well in health, till a year before he began to labour under a difficulty in breathing, which had so increased by degrees, that at length, for three or four months together, he was forced to sit up in bed night and day, for fear of suffocation. He was at that time lean, without any swelling at all; but both his hands and legs were chill, for the most part. His eyes were very dull and heavy; but his face and particularly his lips, were of a dark iron grey, *d'un gris de fer obscur.* He lay with equal uneasiness on both sides; but on his back with still greater uneasiness; and then the colour of his face became more dark, his pulse more small, frequent, and unequal, and the extreme parts of his body seemed still more cold. This man, though he could go from the bed to the fire by himself, yet the next day he died suddenly, at dinner;

Viéussens having both foreseen, and foretold the disease, and death.

A considerable dropsy of the pericardium."

CASE XIII. Obs. ib.

Water in the Chest and Pericardium.

"Vieussens by compairing the symptoms of the preceding and another case, was led to distinguish the same disease soon after in a boy, though it was joined with others, and in particular with the dropsy of the thorax, from these causes; that in the whole progress of the disease, and a little before the conclusion, there had been a palpitation of the heart, that the lower eyelids, and the nails, were of a lead colour; that the patient was very sad, and from some other marks of that kind. In the beginning he had a palish face; the extremities cold; respiration not free, especially when he went up stairs; his pulse soft and too frequent."

The ingenious reasoning used here, and in Obs. 25, are highly worthy the perusal of the reader.

CASE XIV. Obs. 26.

Hydrops Pectoris.—From Morgagni.

"A man at Bologna, had a difficulty of respiration; nor could lie on the left side; on the right he not only could lie, but even lay continually. Although he neither lay with his head raised, nor had swelled feet, yet I enquired whether he was ever waked in

the first hours of sleep, by a sudden sense of suffocation? which he answered in the negative. He complained also of a hardness at the upper part of the belly, which might even be perceived, by applying the hand to that part where the pancreas is generally supposed to lie, so that any one might have taken it for the pancreas indurated. When the belly was opened, after death, it was discovered to be the liver, sound indeed, but depressed on the right side, by the diaphragm. But the thorax, when opened, shewed that so great a quantity lay on that part of the diaphragm, as to have driven the mediastrium much to the left side, though become thicker in its coats."

The author observes in this case, Obs. 27. "That the diaphragm has been sometimes so depressed by the lungs, when enlarged from a certain cause, that the liver has been driven downwards, though in other respects sound, and taken for a tumour by physicians, I have heard; and that from a quantity of water, accumulated in the left cavity of the thorax, the diaphragm, *in the part where it is perforated by the œsophagus, was protruded like a bag towards the left kidney, so that the stomach lay over the liver*, I have read in the Sepulchretum, L. II. S. 7. in Schol. ad Obs. 25. in Additam. This man could lie only on one side," whether the right or the left is not mentioned, but it is presumed on the latter.

CASE XV. Obs. 30.

Water in the Chest, with various other singular morbid appearances.

"A young man, without any evident cause, fell into a difficulty of breathing, before the end of the year 1704. Being on this account, afterwards received into the hospital of St. Mary de Morte at Bologna, he was treated in various methods of cure, but in vain. Among other remedies V. S. was more than once used, with a little immediate, but temporary relief; opening medicines did not afford relief. When I saw him, not quite three days before his death, he was very pallid, and breathed always with his neck upright. When he inspired, I observed that the lower part of the chest was raised very high: he had no thirst, no heat, nor feverish symptom; yet the pulsation of the arteries was frequent, and the pulsation of the heart, which, when we applied our hands to the thorax, seemed to palpitate, was much more frequent: and this comparison being often and accurately made, always answered in the same manner, and the pulsations of the heart and arteries were observed to be surprisingly unequal. The difficulty of breathing being much increased, with swelled face, he died about the hundredth day from the time the disorder had begun."

DISSECTION.

"The omentum was blackish, and covered with glandular globules. Liver diseased and connected with the diaphragm. There was a yellow and green water in the abdomen. Both the cavities of the chest were filled with water of the same kind, mixed with thin membranes. The right lobe of the lungs adhered to the pleura in some places; the left more generally and more firmly." See the case.

CASE XVI. Obs. 34.

Hydrops Pectoris and Pericardii, with Polypi, from repelled scabies.

"A virgin of Bologna, Æt. 18. Having repelled an eruption of the scabies kind, by ointment, was seized with a most violent orthopnœa, without fever, cough, swelling of the feet, or contraction of the nails. Blood being taken from the arm, to the quantity of six or seven ounces, she became much worse: and the same quantity being taken from her foot, some days after, she sunk under it so much, that the difficulty of breathing became more, and she died on the following day. The body was not swelled in any part.

DISSECTION.

The liver was livid, and harder than usual. The whole thorax was filled with a blueish kind of water, which burst forth on cutting the cartilages of the

ribs. The left lobe of the lungs was connected with the pleura posteriorly; the right adhered very closely to the pleura, on the whole of its posterior and lateral surfaces. The pericardium was also distended to such a degree, that before I cut into it, it was very hard to the touch, and made me almost imagine that the heart was much enlarged. It was nevertheless of its natural size, and sound. A polypus was found in each ventricle, like fat that is of a white and yellowish colour."

CASE XVII. Obs. 36.

Water in the Chest and Pericardium, Polypi, &c.

"A woman, Æt. 50. Had a dyspnœa for many days, attended with a wheezing; yet it neither prevented her from lying down or from sleeping. One arm was painful and œdematous; she felt a fluctuation in the thorax on motion, and a weight, even without motion. Finally an œdematous swelling of the feet was added to that of the arm, three or four days before her death, without the dyspnœa being increased; yet she was carried off suddenly, as she was beginning to take food. She had neither been liable to fainting fits, nor had ever complained of any streightness, or constriction, at her heart, nor yet of a pain in her loins; nor finally of any inconvenience that related to the stomach, which I was willing to take notice of here for reasons that will appear on dissection.

The stomach was found contracted; and within its cavity, near the mouth of the pyloris, was a large caruncle, fixed by an oblong stalk to its internal coats. Both cavities of the thorax contained a great quantity of water, of a greenish colour. The pericardium also was distended with water, tinged with the same colour; nearly to the quantity of two pints. The heart was almost wholly covered with fat, and had polypous concretions in the ventricles. In the head was water between the meninges, and in the lateral ventricles."

CASE XVIII. Obs. 38.

Dropsy of the Chest, and Pericardium, with Polypi.

"A country woman, about 25, and of a very pale countenance, having been married four months before; was already past the third month of pregnancy, when she was received into the hospital at Padua, in which she lay a month or more, with a kind of small erratic fever. Her pulse was neither small nor intermitting. There was no thirst. She had no swelling of her feet, and no faintings. Nor did she ever complain of tightness, or oppression, about the heart; nor yet of an anxiety, or sense of weight, nor, indeed of any inconvenience, or difficulty, in the thorax, whatever; except that, now and then, she used to be attacked with a little dry cough, to which she had been for a long time subject, in the

same degree, that is, but slightly. She breathed in generally pretty freely; nor was she roused in the night, by a sense of suffocation, or forced to sit up in bed. She lay down, but on her right side only; and upon this she lay when she died.

The spleen was a little enlarged, the liver much more so. In the right cavity of the chest was a large quantity of yellowish water, in which were a thick mucous kind of membranes. And some water of this kind there was in the left cavity; but in the pericardium so much, that it was almost full, with similar membranes swimming in it. In both the ventricles of the heart were polypous concretions, as if of a kind of mucus; but a little more dense in the left."

CASE XIX. Obs. 40.

Dropsy of the Chest, and Pericardium.

"A man more than 40, who travelled much on foot, carrying goods from one place to another, was used to drink much when hot, and especially latterly, when he had a great thirst on him; and, being seized with a violent fever, and a defluxion of rheum upon his fauces, was taken into the hospital at Bologna. He complained no more of his fauces, but said all his disorder was in his belly; yet complained of nothing more than a pain in the spine, about the lumbar region. Some of the physicians suspected that the disorder was an inflammation of the bowels; but Valsalva that it was in the thorax.

The pulse was weak and low; yet seemed oppressed. He would often rise up, as if he were going away; and in this manner he died, the third or fourth day from the time of his admission."

"In the thorax, and particularly in one part, an humour stagnated, in which pieces, as it were of the most white and thin membranes swam. The pericardium was so distended, that upon the slightest prick, it threw out a small stream of fluid, like a fountain, to a very considerable height. The apex of the heart was a little more red than usual. Much water was found between the dura and pia mater: some of the vessels of the former were tinged with blood."

Some very ingenious observations on the case are subjoined.

CASE XX. Obs. 43.

Dropsy of the Pericardium only.

"There was at Bologna a nun, of an illustrious family, whom a physician had cured of a defluxion upon her gums and cheeks, by giving her sudorific decoctions of the woods; and afterwards, being seized with an acute fever, had been restored to health with equal success. She was strongly urged by the same physician, though in perfect health, to submit to a course of similar medicine the following spring, and at length very reluctantly consented. With others of the convent she had taken as much of the *syrupus aureus* as occasioned near fifty motions; by

which an intolerable thirst was brought on, that did not remit on drinking a large quantity of broths, and for this reason she was ordered to drink freely of dilute emulsions; nor was the urine in proportion to the quantity of fluid she took in. The day afterwards, having sat up in bed, with an intention to rise, and having begun to put on her clothes, she was suddenly seized with a kind of oppression at her heart, as if a stone was laid upon it, to which a fainting fit succeeded; and from that time, this oppression never failed to be exacerbated as often as she spoke or moved too much. Many physicians were consulted, whose opinions, as generally happens in disorders of this kind, being very different, Albertini was added to the number. One conjectured a polypus, another an aneurism, another a tubercle of the lungs, and some a dropsy of the lungs or thorax. Albertini after much caution and deliberation, and visiting the patient diligently several times, pronounced the disease to be a dropsy of the pericardium.

This virgin had a good colour in her face; her sleep was undisturbed; she was regular in her bowels, and in her *menstrua;* her respiration was equally easy, whether she stood up or lay on her back, on the right or on the left side. Her pulse was neither tense, nor hard, nor chord like, nor in the least irregular in any way. She had no palpitation, or large pulsation, in the heart; no pain about the region of the lungs; no cough; nor any other unpleasant symptoms, except those mentioned.

When still and quiet, she had no oppression about the heart; but on motion, or on speaking for any length of time, she was tortured therewith immediately, or to use her own expressions, "as if she was pressed and squeezed up," with a great concourse of people all round her, accompanied always by a slight kind of fainting; and her pulse, even when she was quiet, was always weak.

The virgin at length died, as Albertini had predicted. For when she dragged on life, to about the end of a year, from the beginning of her disease; a momentary sense of pricking began to be added to the other symptoms, which returned now and then in the part affected, attended with slight convulsions in the same place; the pulse began gradually to be more and more weakened, and in a manner obscured; which were not fallacious symptoms of death being now at hand.

The pericardium was tumid with water, to the quantity of nine ounces, and the membrane of the heart began to be eroded, without doubt from the water, which was at length become very acrid from its stagnation, from whence that sense of pricking had been felt, and those slight convulsions had happened."

The perusal of the whole of this extraordinary case is recommended to the reader. It is given by Albertini.

FROM HOFFMAN.

CASE I.

"A man Æt. 30. Of a florid complexion, who, in the early part of life, when in the army, was much addicted to intemperance, and exposed frequently to cold, which affected his chest principally, was seized with a fixed pain of the left side, and difficulty in breathing. Having been obliged to quit the army, and to change his active mode of living, for a quiet retired life: to the pain and difficult breathing were added a cough, a great anxiety and streightness about the præcordia, which increased to such a degree that he could only breathe freely at a window: the left foot, leg, thigh, and scrotum swelled; the urine was scanty and of a yellowish colour. At length after an immoderate fit of laughing he complained of a very great difficulty and tightness in breathing, amounting nearly to suffocation; the pulse was small and unequal; and after coughing violently he brought up some blood, and finally his strength being exhausted he died in three days after.

In the left cavity of the thorax were near seven pounds of water. The vessels of the heart were of a white colour, dense, and hard, like a quill; the lungs were much contracted. There was a polypus in the pulmonary artery."

FROM HOMES CLINICAL EXPERIMENTS.

CASE I.

Hydrops Pectoris.

February 11, 1774.—"Francis Hardy, Æt. 60. A smith, and used to drinking, has been affected for six years with cough, difficult breathing, pain of his breast, sense of weight between his shoulders, and increase of his complaints when he lies on his back, or left side. Some time ago his legs and body began to swell. A sensible fluctuation in the abdomen. Paucity of urine. Belly bound. Pulse 100. From a sense of suffocation, when going to sleep, he starts up in an erect posture.—17th, died.

Three pounds of fluid in the thorax, mostly in the right side, with some slight adhesions of the lungs with the pleura. Right lobe sound, but on cutting the left a good deal of pus issued out. The pericardium was much fuller of fluid than it ought to be. In the cavity of the abdomen six pounds of fluid were found. Liver harder than usual."

CASE II.

Hydrothorax &c.

March 4.—John Farguhar, Æt. 60. About the beginning of January last, felt a pain in the region of the liver, especially on being pressed. His belly began to swell about the middle of the month. In the beginning of February his legs became œdema-

tous. Can scarcely lie horizontally in bed, and starts for fear of suffocation, when going to sleep. Has not been able to lie on his left side for two months, as it occasions the pain and difficulty of breathing. Feels neither weight, oppression, nor fluctuation in his breast. Dry cough. Belly bound. Urine of a deep colour and diminished in quantity. Pulse 110 and not irregular. Has had nausea and vomiting for these four days. 8th, died this day, when raised up in bed, and speaking as usual.

In the abdomen was found one pound of lymph; and the intestines adhered in some places to the peritoneum. The liver was considerably larger than natural, but not schirrous. About one pound and a half of fluid was found in the right cavity of the thorax. The under part of the right lobe of the lungs, and the diaphragm and pleura contiguous to it, were inflamed. Part of the pulmonary artery was ossified."

CASE III.

May 24, 1769.—" T. Keir, a taylor, Æt. 45. For four years, has had dyspnœa, cough, uneasiness on lying on *right* side, the sensation of something moving in his breast on turning in bed, and pain and swelling of the liver. Of late ascites, anasarca, and scanty urine. Was relieved for six months, but relapsed, and died.

The lungs adhered almost wholly to the pleura; and in the *right* cavity was found a pint of fluid."

CASE IV.

Hydrothorax, &c.

February 10, 1778.—"M. Macculloch, Æt. 53. Addicted to drinking; had, five years ago, a fever, followed by three relapses. His legs afterwards swelled and pitted, especially when he was exposed to cold and moisture. A month before he came in, was seized with dry cough, dyspnœa, and orthopnœa, tightness and pain of the breast under the sternum, sudden starting when going to sleep, as from suffocation. An evident swelling was observed in his breast at the extremity of the first and second ribs, on the left side, where he received a stroke five years ago, and which still continues painful on pressure. Urine in natural quantity but high coloured. Pulse from 64 to 68, and weak, but not irregular. March 11th, dismissed cured, by means of cream of tartar."

CASE V.

March 16.—"Sophia Mack, Æt. 31. Caught cold three weeks ago while taking purging salts. Two days afterwards her legs, and then her body began to swell; and she is now very anasarcous. These complaints were attended with dry cough, much hoarseness, pain of her head, dyspnœa, nausea, thirst, frequent shivering, severe stitch in her breast, difficult lying on the left side, and pulse from 70 to 80, and very strong. As these dropsical symptoms ap-

peared to arise from a local pulmonary affection, or at least to be attended with a general inflammatory state, which is uncommon in this disease, V. S. mucilaginous pectorals, and ol. recini were ordered.

The blood being very buffy, the cough troublesome, with spitting of blood, and the pulse continuing very full, she was let blood afterwards six times, namely, the 19th, 21st, 22d, 27th, 30th, and April 3d, to the quantity of 49 ounces, beside that on the 16th which we shall suppose eight ounces, so that in eighteen days she lost 57 ounces of blood (which was covered with a thick inflammatory crust), to which the cure was principally attributed by the author."

FROM HOFFMAN.

CASE I. Chap. xiv. obs. vi. vol. vii. p. 469.

De Hydrope.

"Vir, Æt. 50, lautiori diætæ vitæque sedentariæ addictus et lacticinia cum fructibus acidis horæus in deliciis habens, prægresso diuturniori mœrore incidit in cachecticum corporis habitum, ex colore faciei lurido, sublivido et ad flavedinem inclinante satis conspicuum; unde ciborum appetentia, satis antea vegeta una cum viribus valde concidebat, flatus et borborigmi in abdomine, obsegniorum alvum, miras creabant molestias, respiratio cum præcordiorum anxietate reddebatur difficillima, ut per intervalla morti proximus æger haberetur, et, quod

maximum erat, pulsus micabat debilis, nonnunquam intermittens, plerumque inæqualis. His tandem malis jungebatur icteritius faciei color cum majori pectoris angustia pedum, femorum, scrotique, intumescentia, donec omnibus in pejus ruentibus æger obiit.

Cadavere aperto in abdomine pariter ac thorace magna seri extravasati conspiciebatur copia. In cordis et pulmonum vasis delitescebant concrementa polyposa, ex dextro cordis ventriculo per arteriæ pulmonalis ramos dispersa. Totum vero hepar cum liene atro sanguine inveniebatur infarctum, &c."

Interesting observations on the case follow.

CASE II. Ibid. Obs. ix.

See a very interesting case which terminated successfully, in which, says the celebrated author, " abstinuimus ab omnibus fortioribus hydragogis et diureticis, et potius injuncto accuratiori vitæ regimine medicamenta dedimus balsamica amara, stomachica et carminativa, interpositis subinde salibus detersivis et aperientibus," &c.

In the Monita and Præcepta Medica of Dr. Mead, the following curious case is described, which I shall transcribe in the authors words.

" Virgo, Æt. 17: sensit sibi intumescere ventrem, parvaque copia urinam reddi; a quibuscunque remediis pejus habuit, et post annum haud aliter ac gravidæ distendebatur abdomen. Eo tempore nupsit, spe proposita, maritum fore pro medico. At longe secus res evenit, per annos tres increvit sen-

sim hydrops, ita ut tandem ventris disruptio formidaretur. Cum dolor jam intolerabilis premeret, a me petiit, ut aquam manu chirurgi, quem in Nosocomio eventu secundo hanc medicinam fecisse audiverat, quo saltem levaretur cruciatus, educi curarem. Ergo, ne occidisse, quam servare non potui, viderer, in corpore macie jam pæne confecto, id sine maximo vitæ periculo tentari non posse edixi. Misera tamen instare, et precibus rogare, ne se desererem, assiduis tormentis et lenta morte consumendam. Cessi precibus victus, et illa, quam dixi, via emissæ sunt simul et semel humoris limpidi, et nullo modo fœtidi lib. 60. Ex eo tempore indies auctæ sunt vires, morboque nunquam postea revertente, elapsis decem mensibus filium robustum peperit; plurium etiam exinde fœcunda parens."

In the following interesting case communicated by the late Dr. Fothergill to Dr. D. Monro, the symptoms are so strongly marked, and so accurately described, that I shall, I am persuaded, be excused in copying it.

"A gentleman of a fresh complexion, full, lax habit, and a large make; in respect to liquors, for the most part temperate, with a good appetite, and ample means of gratifying it; about the 56th year of his age, perceived, upon a little unusual motion, an obstruction to his breathing, attended with a palpitation of the heart.

These complaints gradually increased so much as to induce him to consult his physician, to whom he gave the following account.

That on walking one hot day, after having spent an hour or two in business, in a room crowded with company, he found such an uneasy straitness of the wind pipe, just above the sternum, that it seemed as if a bur, as he termed it, stuck there, and hindered him from breathing with his usual freedom: that at night, upon going to bed, he had a palpitation of the heart, and a greater difficulty in finding such a posture as he could lie in with ease than he had ever before experienced.

It was not every night he found himself thus afflicted: sometimes he had three or four bad nights successively, in which he was either obliged to sit up most part of the night, or altogether prevented from sleeping when able to keep in bed.

Things had continued in this situation some months. His countenance was then fresh and florid; his breathing upon motion somewhat laborious; he coughed but little, and this rather voluntarily, to fetch up something that to him seemed obstructing the wind pipe, than from an irritation of the lungs themselves. His pulse was extremely irregular, never beating five strokes alike, but varying incessantly, either in respect to frequency, or strength, or both; his urine was high coloured, depositing for the most part a copious sediment, of a colour betwixt the lateritious and carnation; his stools

regular in every respect; he found himself commonly easiest when lax, and his breath laborious if ever so little costive. He had no heat, thirst, dry tongue, or any symptoms of a fever, except a high coloured urine, which was accounted for from its being in small quantities. No peripneumonic symptoms, except laborious breathing; no appearance of a humoral asthma; nor was it apprehended that a convulsive one could produce just such appearances, especially as the irregularity of the pulse was not less when the breathing was free and easy, than when it proceeded to such a pitch as to oblige the patient to rise out of bed at midnight, to avoid the danger of immediate suffocation.

As the patient had lived in such a manner as might seem to have intitled him to the gout, and he was then at an age when the first attacks of this disease are most commonly irregular, this likewise was taken into consideration; though the constant irregularity of the pulse rather seemed to indicate, that something more permanent was the cause than the gouty matter, which, whenever it attacks these unsuspected parts, most commonly allows of some, though oft uncertain and short vacations. After moderate evacuations, by bleeding and purging, were first premised a course of gum pills extract of the bark, chalybeats in very small doses was recommended, with some mild balsamicks intermixed. No increase of the symptoms being observed from this method, it was persisted in some time; the air

and moderate exercise on horseback proposed, and a due regard to quantity as well as the quality of aliments. A longer truce seemed to be gained by this method than had been perceived from the first attack; but as the winter approached, this calm was often interrupted, frequently without any manifest cause; the patient being often obliged to rise after he had been an hour in bed and spend the remaining part of the night. This soon brought on an œdematous swelling of his legs, heaviness by day, inquietude by night, and the evident symptoms of an *hydrops pectoris*.

By the use of the following remedy, viz. ℞. Sapon. venet. scrup. i. g. ammon. gr. x. pulv. scill. sicc. gr. iv. syr. simp. q. s. f. bol. s. 6ta. q. h. near a gallon of urine was discharged in one night, which lessened the dyspnœa, abated the anasarcous swelling that had spread even to his hips and belly, enabled him to continue quietly and easily in bed through the night, and gave him and every one about him hopes of a speedy amendment. He enjoyed this tranquility a month or six weeks, the irregularity of his pulse nevertheless continuing, though remarkably less after this evacuation of urine; once he seemed during the summer to have acquired firm health, his pulse becoming somewhat less intermittent, and the other symptoms disappearing; but this was only a longer interval than ordinary. The returning winter brought with it his former complaints; and though fontanels, blisters, diureticks, purgatives,

corroborants intermixed, were tried, under the direction of some of the ablest persons of the profession, his disorder increased, and he was at last *suddenly* suffocated by the load of water in the thorax."

Many more interesting cases and dissections might be added; but this part of the work having already exceeded the bounds prescribed, I shall content myself with referring those who may be desirous of farther information, to the following sources. See *Willis's Pharm. Rat. p.* 2. *sect. cap. xiii. de hydrope pectoris*, in which an interesting case is mentioned to have been cured by the operation, the canula being left in for a considerable time. Also, *Memoir de làcad. des sciences* 1703, in which two interesting cases are detailed. *Bonetus lib. ii. sect. i. obs.* 60, gives an account of the dissection of a man who died of dropsy, in whose pericardium were found thirty ounces of water. See also ibid. obs. 41.

Since the Appendix No. 1. has been printed, several interesting cases have fallen under my care, in which the results have been highly satisfactory. In one instance the disorder yielded very slowly to the usual remedies till salivation was produced, which was more profuse and of longer duration than was intended, in consequence of inattention to the injunctions laid down; but the cure has been

complete, the patient having enjoyed perfect health ever since: The legs were hard and tense.

Of late I have used the nitric acid very freely both before and after the water has been evacuated, and it promises to prove a valuable auxiliary to the means recommended in the foregoing pages.

FINIS.

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